The UNESCO COURIER

INTERVIEW WITH DANIEL J. BOORSTIN

JANUARY 1991

CITIES UNDER STRESS

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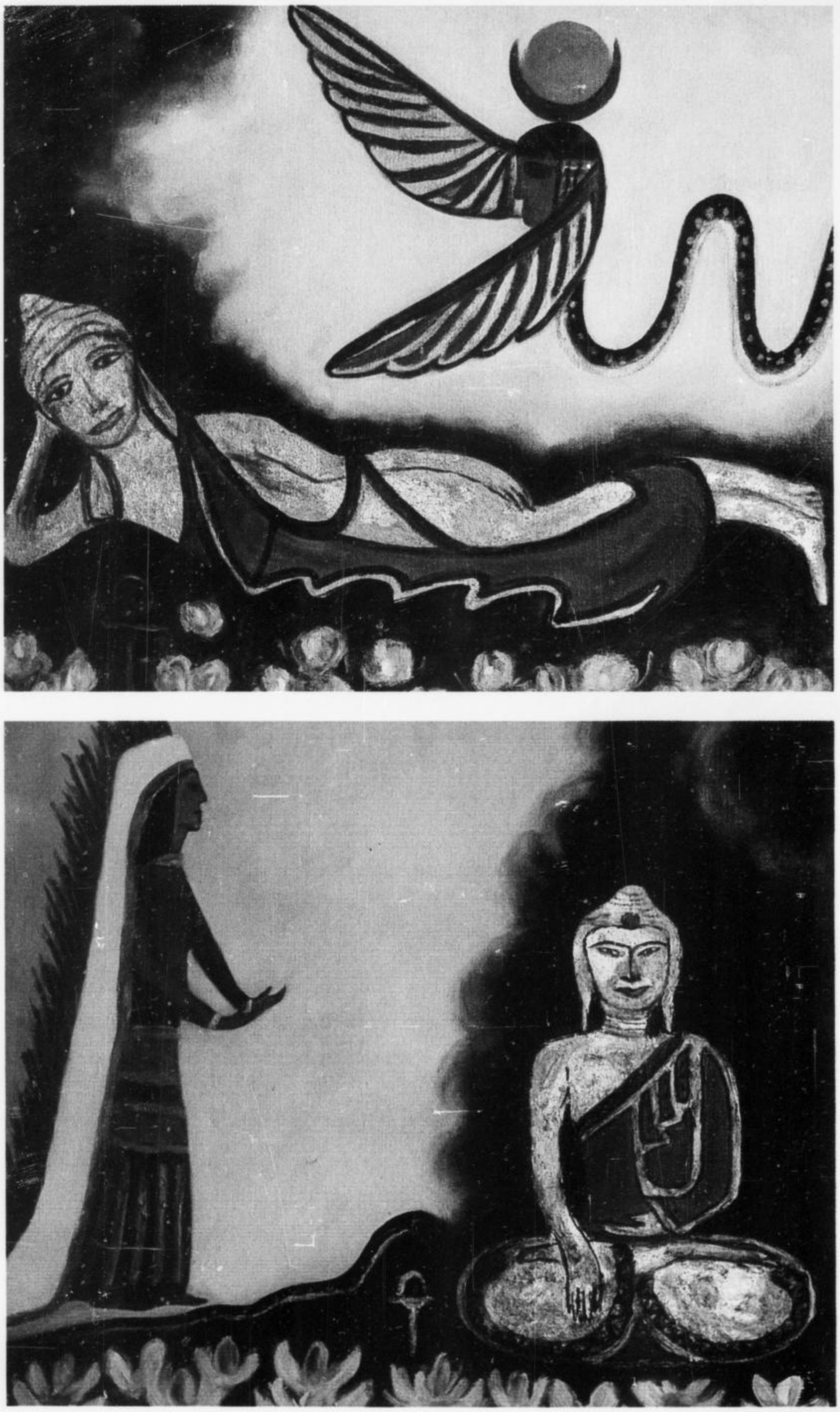
encounters

We invite readers to send us photographs to be considered for publication in this feature. Your photo should show a painting, a sculpture, piece of architecture or any other subject which seems to be an example of cross-fertilization between cultures. Alternatively, you could send us pictures of two works from different cultural backgrounds in which you see some striking connection or resemblance. Please add a short caption to all photographs.



DIALOGUE OF CULTURES
1986, oil paintings on canvas (50 x 60 cm)
by Helena Delgado Rufino

Inspired by the contact between civilizations which followed the maritime discoveries of her countrymen, this Portuguese artist conveys "the enigmatic relations between individuals and between peoples". Different cultures meet in her work through the intermingling of their myths, heroes, gods and demons.

JANUARY 1991

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Cover: Detail of a wall painting by Jan A. T. Erkrich, Milwaukee, Wisconsin (USA), 1981.

Back cover: Montage by the Yugoslavian photographer D. Stamenkovich.

The UNESCO COURIER

44th YEAR
Published monthly in 35 languages and in Braille

"The Governments of the States parties to this Constitution on behalf of their peoples declare,

"that since wars begin in the minds of men, it is in the minds of men that the defences of peace must be constructed...

"that a peace based exclusively upon the political and economic arrangements of governments would not be a peace which could secure the unanimous, lasting and sincere support of the peoples of the world, and that the peace must therefore be founded, if it is not to fail, upon the intellectual and moral solidarity of mankind.

"For these reasons, the States parties ... are agreed and determined to develop and to increase the means of communication between their peoples and to employ these means for the purposes of mutual understanding and a truer and more perfect knowledge of each other's lives..."

Extract from the Preamble to the Constitution of Unesco, London, 16 November 1945

I N T E R V I E W

Daniel J. Boorstin

The distinguished American historian Daniel J. Boorstin directed the Library of Congress in Washington D.C. for twelve years and is now Librarian of Congress Emeritus. Here he talks about the American past and its influence on the development of his country's institutions.

Professor Boorstin's many books include a trilogy, *The Americans* (Random House, New York, 1958-1973/Cardinal, London, 1988); *The Image, A Guide to Pseudo-Events in America* (Atheneum, New York, 1988); and *The Discoverers,* a history of man's search to know the world and himself (Random House, 1983/Dent, London, 1984, Penguin Books, London, 1986). He is now at work on *The Creators,* a companion volume on the history of the arts.

■ *With the movement towards democracy in Eastern Europe, the idea that we are seeing the "end of history" is gaining currency. As a historian, what do you think of this?*

— I don't think history has any end. Moreover, I think of history as a cautionary science, one of the purposes of which is to warn us against just such generalizations. Historians should not play the role of prophets. It's difficult enough to be a historian. I think that among the excesses which historians should caution us against are prophecies of Utopia or Armageddon, or the beginning, or the end. These prophecies have been made again and again, more often by religious fanatics and by people frustrated with their own lives than by serious students of history.

The events in Europe suggest that we may have been a little hasty in assumptions about the impossibility of change, or the necessity of change only in one direction. In the United States, we are a nation of immigrant people who procured democracy simply by becoming democratic, simply by coming to our country. We assume that it's very easy for people to change their political attitudes without reference to the history that they inherit.

■ *Is it very easy? Or is this specific to pioneer countries?*

— It depends on what you mean by a pioneer country, but I think that one of the characteristics of people living in many pioneering situations in the United States, for example in the movement westwards, is that they were not conscious that they were building political institutions. The wagon trains that moved West formed their own constitutions, and they had to have rules of conduct, a way of trying people for crimes they had committed. I don't think they ever thought of it as creating a political life, it was a matter of convenience when crossing the prairies together. One of the consequences of the American experience of moving across a sparsely-populated continent was that people became political through force of circumstance. When they found themselves in Wyoming or one of the Dakotas, they had to make

legislation to protect their property and their families, whereas in Europe they would have left that to the people who had always had the job of protecting others.

■ ***People became political through force of circumstance, but did they become democratic?***

— One of the characteristics of the movement West is that people were forming new communities, which led to a very vivid sense of solidarity. They knew that they had to cooperate with their fellows. Another feature of American society, perhaps one of the most important, has been the lack of ideology. In more settled communities, such as England, where there was a long inheritance of established law and institutions reaching back to the Middle Ages, if you wanted to change those institutions, you had to develop a theoretical argument, and so you find a succession of political theorists—Locke, Hobbes and others—rationalizing institutional changes. For Americans, who came out to a continent that had been barren, there was no history, you might say there was only geography. This meant that people had to invent institutions to serve their convenience. They were not living near their ancestors, in fact there were no ancestors, once in the West. And of course the same story was repeated in a different, urban, landscape in late-nineteenth-century New York.

My grandparents came to America from the ghettoes of Poland and Russia, they came to start a new life.... One of my grandfathers went to a country town in the state of Georgia and opened a store. His brother then came and settled in the same town, and they had shops on opposite sides of the same street under different names, because the immigration officer hadn't been able to pronounce the name that he'd been given. It was very puzzling, but it was a symbol of the way in which the movement to America separated people from the kind of necessary and self-evident affiliations which a long life in the same village would have created in Europe.

As I wrote many years ago in *The Genius of American Politics,*[1] one of the paradoxes of American political life is that we have been relatively successful in the United States in building political institutions empirically, and yet conspicuously unsuccessful in producing great political philosophy. I suggested that those two facts are not unrelated. In the United States we have been willing to work out a political society without always knowing what we were doing or worrying about the long-term end. The great debate in American political life is of course about our Constitution, which I call a piece of political technology, not a political philosophy. It was the product of an effort to find ways for people who had come from different countries, different cultures, different religions, to live together by forming their own communities. This is what the federal system is, an interaction of communities, and it was not necessary to agree upon a political philosophy.

Jefferson, whom we sometimes think of as our great political philosopher, was not really a philosopher, he was a student of law and English institutions. His *A Summary View of the Rights of British America,* the book he wrote

The signing of the United States Constitution, by American artist Howard Chandler Christy (late 19th century).

Above, Black slaves on a tobacco plantation in one of the southern states. Italian engraving, c. 1820.
Opposite page, Gary Cooper plays the role of a heroic town marshal in the classic Western *High Noon* (1952).
Below right, pioneers cross the Arkansas river in the early 1880s.

in 1774 which became the legal raison d'être of the American Revolution, was really a description of the way in which the old Anglo-Saxon customs preserved people's rights; and the Declaration of Independence, which he drafted, is really a list of rights. Most of what is a long legal document concerns the way in which the traditional legal privileges of Englishmen had been violated in America, and the Preamble, the part most often quoted, is a way of inviting the sympathy of people all over the world. So the American Revolution was really an affirmation of traditional rights, and in that sense it's very different from the French Revolution of 1789, which talked about the rights of man. The Declaration of the Rights of Man and the Citizen is a list of abstract rights which didn't exist anywhere in the world.

We still have many problems and many injustices in our country, but I am amazed when I come back to the United States from any other country and see how many different races of people and different ways of life have been brought together. It's relatively peaceful—we've never had a religious war, for example. The only other country in the world of which that's true is probably Japan. We had a terrible Civil War, the bloodiest war of the nineteenth century, but it was not a religious war.

■ *As regards the reasons for the Civil War, why didn't Jefferson abolish slavery when drafting the Declaration of Independence?*

— Jefferson didn't live in the air, he lived in a particular community in Virginia, and there were institutions of which he was part. It would have taken a great deal of boldness at that time to insist on the abolition of slavery, but in his original draft he had included a clearer statement against slavery, and there is still a shadow of that in the Declaration. But slavery was an established institution and a basis of the economy in itself.

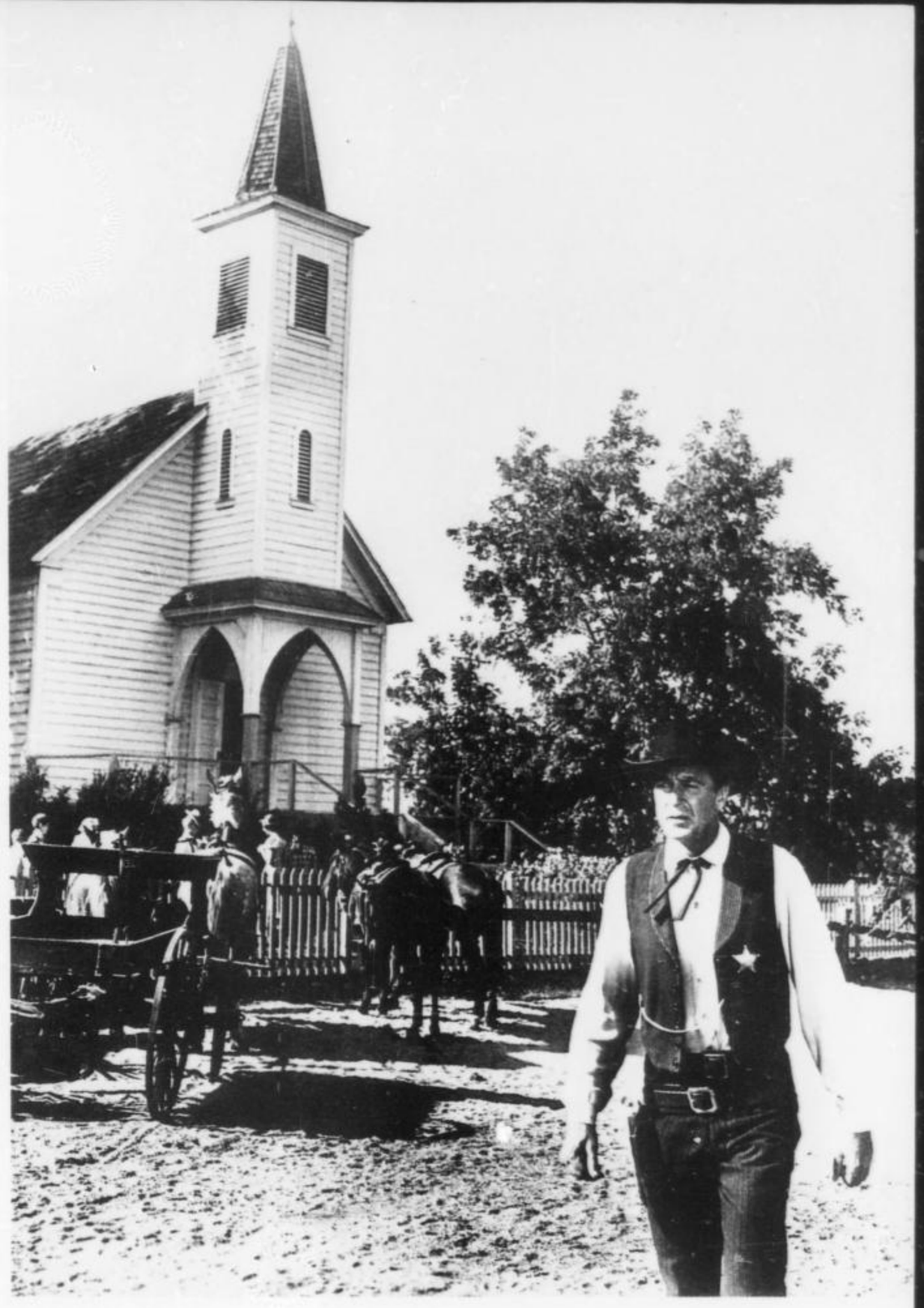
■ *Isn't it striking that American political and democratic institutions evolved parallel with the fight against the Indians, and later, with the repression of the slaves?*
— Slavery was a regional institution, which only existed in the south and certain other parts of the United States.

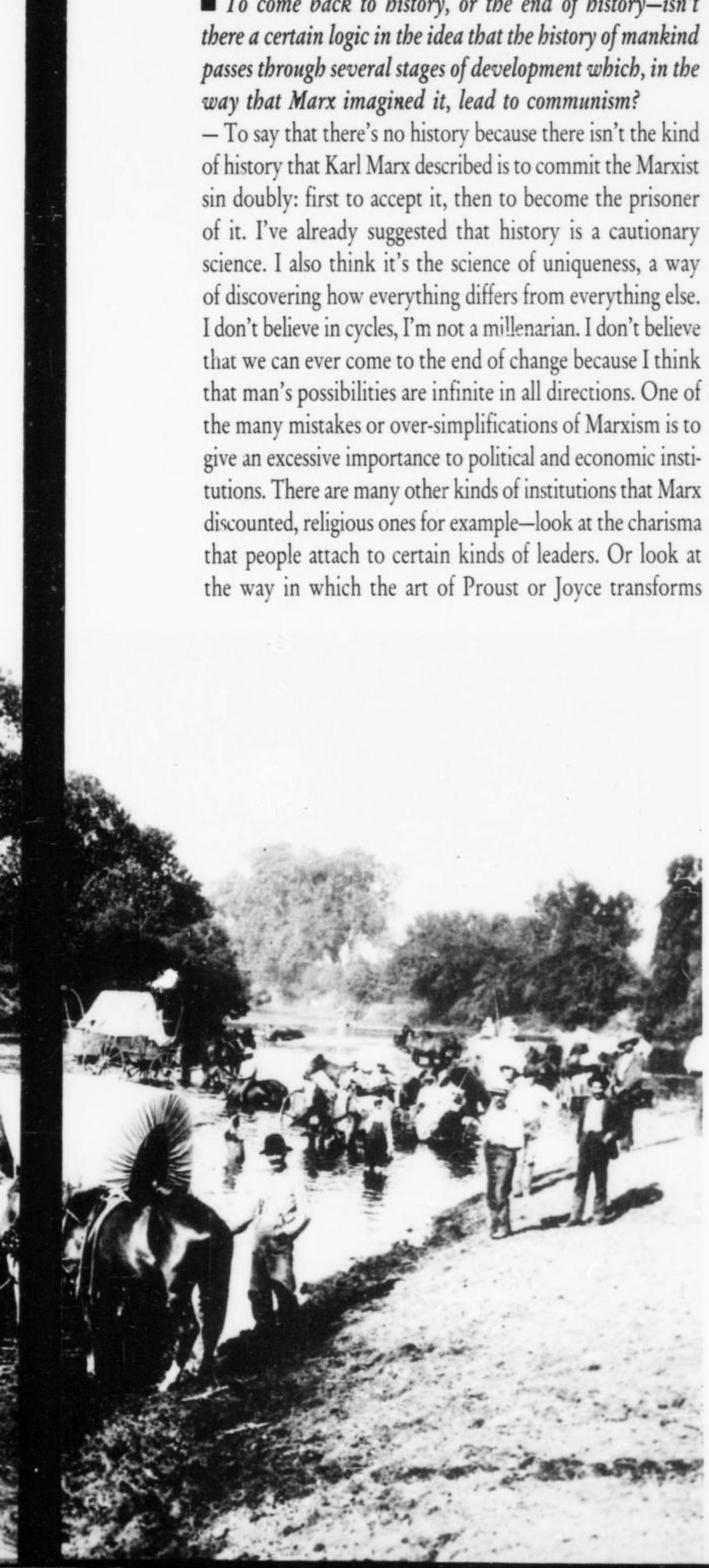
■ *Yes, but didn't the existence of slavery give rise to the fear of an enemy within?*
— No, I don't think so. There were some slave uprisings, but these were relatively few. I don't think that the plantation owners in the south considered their slaves as enemies, but rather as part of the family. I'm not saying it wasn't unjust, but at the same time the plantation wives played a very positive role in delivering babies and looking after the health of people in the slave quarters. They considered that they had a duty to do so. It was like a feudal community in Europe where the lord didn't consider that he was oppressing his vassals or his peasants, he saw himself as their

protector. For many people, too, the belief in the inferiority of the Black race was very strong. They thought that they were protecting people who were helpless or feckless. That was the way they looked at it. You and I may find that immoral but nevertheless that was how they saw things. They didn't feel that they were living in a fortress, that their plantation houses would be besieged by the slaves. This did happen, but very rarely.

■ *To come back to history, or the end of history—isn't there a certain logic in the idea that the history of mankind passes through several stages of development which, in the way that Marx imagined it, lead to communism?*

— To say that there's no history because there isn't the kind of history that Karl Marx described is to commit the Marxist sin doubly: first to accept it, then to become the prisoner of it. I've already suggested that history is a cautionary science. I also think it's the science of uniqueness, a way of discovering how everything differs from everything else. I don't believe in cycles, I'm not a millenarian. I don't believe that we can ever come to the end of change because I think that man's possibilities are infinite in all directions. One of the many mistakes or over-simplifications of Marxism is to give an excessive importance to political and economic institutions. There are many other kinds of institutions that Marx discounted, religious ones for example—look at the charisma that people attach to certain kinds of leaders. Or look at the way in which the art of Proust or Joyce transforms





people's consciousness, which seems to me to have no visible relation to the infrastructure of society. That's history. Shakespeare was history, Chaucer was history, Homer was history, and to say that we've come to the end of history is to deny our humanity, because our humanity consists in a need to pursue the unknown and the new, to be prepared for the unexpected. We cannot stop creating new kinds of art, we cannot stop research into microgenetics and atomic physics. That's the penalty and the glory of being human, that's the meaning I attach to having eaten the apple in the Garden of Eden. We can't stop knowing.

There's another aspect to this question. Sometimes people, especially historians, talk about the difficulty of remembering, as if history is the product of memory. Our problem is not so much that we can't remember, but that we can't forget. It's much more difficult to forget than to remember, and that is one of the consequences that the world has to face when any nation has committed crimes. The massacre of millions of people by the Nazis, for example, is unforgettable, and it will affect attitudes towards Germany for ever.

■ *Do you think so?*

— I think so, unfortunately for those who happen to be born in Germany, because it's not their fault. They're just as

Above, taking the oath in a naturalization ceremony on Ellis Island, the former immigration station in New York Harbor.

virtuous as anyone else, but that is their inheritance and the price of memory. If we're going to have peace in the world, our problem is to find ways of remembering without being overwhelmed by it.

■ *If we're going to have peace in the world, do you think democracy will have to grow? Do you think the whole world is ripe for it?*

— I don't believe in that kind of generalization, or that any country can prescribe institutions for other countries. I think that fulfilment, the apple that I referred to, is that every nation should seek its own way. I don't believe it's the destiny of the world to become American, for instance. It would be very dreary if that were the case.

There have been Americans who thought that we should try and enforce our will on the world. But the same thing has happened in the Soviet Union, and in many other countries. The ancient Greeks and Romans were perhaps more tolerant in that respect. I think it's futile to try to assimilate the world, our object ought to be to find the means to allow people to pursue their own ways.

■ *You mean that you don't accept the idea that there may be universal laws which govern humanity?*

— I'm not saying there are none, but I don't know any. Coming back to what I said earlier, one of the purposes of history as a cautionary science is to make us wary of people who pretend to know the ideal laws of the world. The United States does in my opinion have a mission in the world, and that is to be an example of the possibility of people living together without political ideology, even without the same religion. We see in the Soviet Union now the consequences of not having found a way for allowing people to live together, with their different religions and different traditions.

In so many places there have been wars over language, but in the United States we've had the curious and, until now at least, instructive experience of people coming to another country and learning another language without losing their dignity. My grandparents spoke Yiddish. They learned to speak English and they didn't feel that their life had been ruined or that they had been deprived of their personality. On the contrary, people here have discovered that it's possible to learn another language and still be fulfilled.

This sense of openness, of starting anew, is illustrated in my recent book, *The Discoverers,* one of the leitmotifs of which is that the enemy of progress is not ignorance but the illusion of knowledge. This is applicable to political life. People who always have doubts, who have the courage to doubt, are those least likely to impose their ways on others. People who acquire a sense of rectitude and believe that they know best are the enemies of decent society.

■ *Do you feel that people in the United States have found the best way for them to live in harmony?*

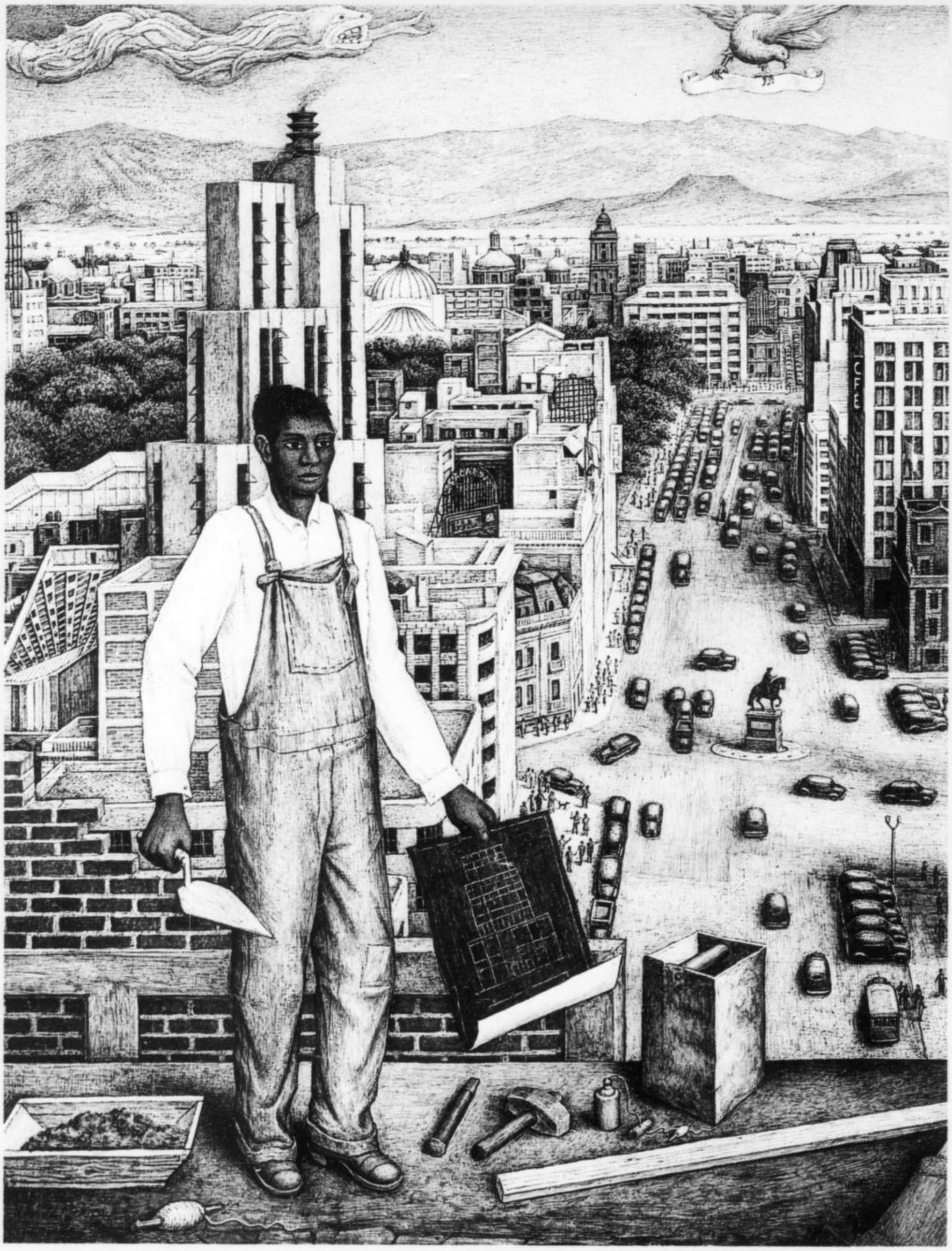
– Possibly...but I think that if you travel, you discover that other people's way of life is just as valid. In this respect, one of my great experiences was living in Japan, where I taught a number of years ago. I discovered that almost all the categories of history that I was accustomed to didn't exist in Japan. It was possible for people to be human, to treat one another decently, without anything that Westerners would call religion, for example. So much else is entirely different. The architect in the West tries to build something that will last for ever, like the Parthenon or the Pyramids, while traditional Japanese architecture is in wood. You expect it to disintegrate, and you rebuild it. The architect is not fighting a battle against time, he's co-operating with time, accepting it. In Japanese wrestling, you try to overcome your opponent by yielding to him, not by aggression. That's how you bring him down. There is a temptation to believe that our way of doing everything is right, and it's discomforting to discover that there's another way of doing it. That's what it means to be human, to accept that price, to fulfil ourselves by acquiring the capacity to doubt and a willingness to have the new displace the old.

The same is true of the progress of science. We see scientific ideas as great additions to our knowledge, but every advance of scientific knowledge is also a kind of subtraction. When Copernicus persuaded people that the Sun didn't go round the Earth, he caused a lot of trouble. The idea was wonderful, it was a step forward, but it also destroyed a whole world of folklore and theology. The most explosive thing in the world today is the atom, which for most of history people thought of as unbreakable by definition—a good example of the advance of science subtracting from our sense of security.

■ *When Apollo sent back the first pictures of the Earth seen from the Moon, surely that created new myths about our planet?*

– Science is not always subtractive—we can still learn something from Aristotle—whereas the arts, it seems to me, are always additive. There's no work of art that subtracts from another work of art. Michelangelo doesn't subtract from Phidias, Picasso doesn't subtract from other modern artists...if anything each work adds to our understanding because it creates a new contrast. That's one of the reasons why the arts become increasingly important with the advance of technology, which tends to reduce cultural diversity. With television, for example, there is obviously much less difference between being there and being here, and the same applies to advances in transportation and communication. But the arts encourage cultural specificity. The artist creates a difference between now and then, and here and there, and me and you, and this and that. So there is a mission for the arts which is increasingly urgent. ■

1. *The Genius of American Politics,* Phoenix Books, University of Chicago Press, 1953.



EDITORIAL

ON the eve of the twenty-first century over half the world's population will be living in cities. Urbanization is proceeding at a pace that would have been unimaginable a few decades ago.

In the developing countries, rapid population growth and the concentration of economic activity around big cities have swelled a massive influx of urban migrants which governments can no longer reverse or even slow down. Rampant urbanization has gone hand in hand with inner city decline, proliferating squatter settlements, and the construction of illegal dwellings in mushrooming slums and shanty towns.

The industrialized countries, where around 80 per cent of the population already lives in urban areas, are also facing problems. Where they have survived the ravages of war or the utopian dreams of planners, many historic city centres are a prey to speculation and pollution, while soulless suburban development testifies to the failure of ill-thought-out approaches to urban planning.

Cities everywhere present increasingly striking contrasts. Though they may produce much of a country's wealth, they also bear the brunt of its poverty.

It is high time to mobilize this wealth to create urban centres fit for people to live in, to return the city to those who live in it. Many city-dwellers deploy indomitable forces of ingenuity, tenacity and solidarity in a struggle for survival. These energies must be tapped if we are to avert tragedy and create a bright urban future.

***Mexico City*, by the Mexican architect and muralist Juan O'Gorman (1905-1982).**

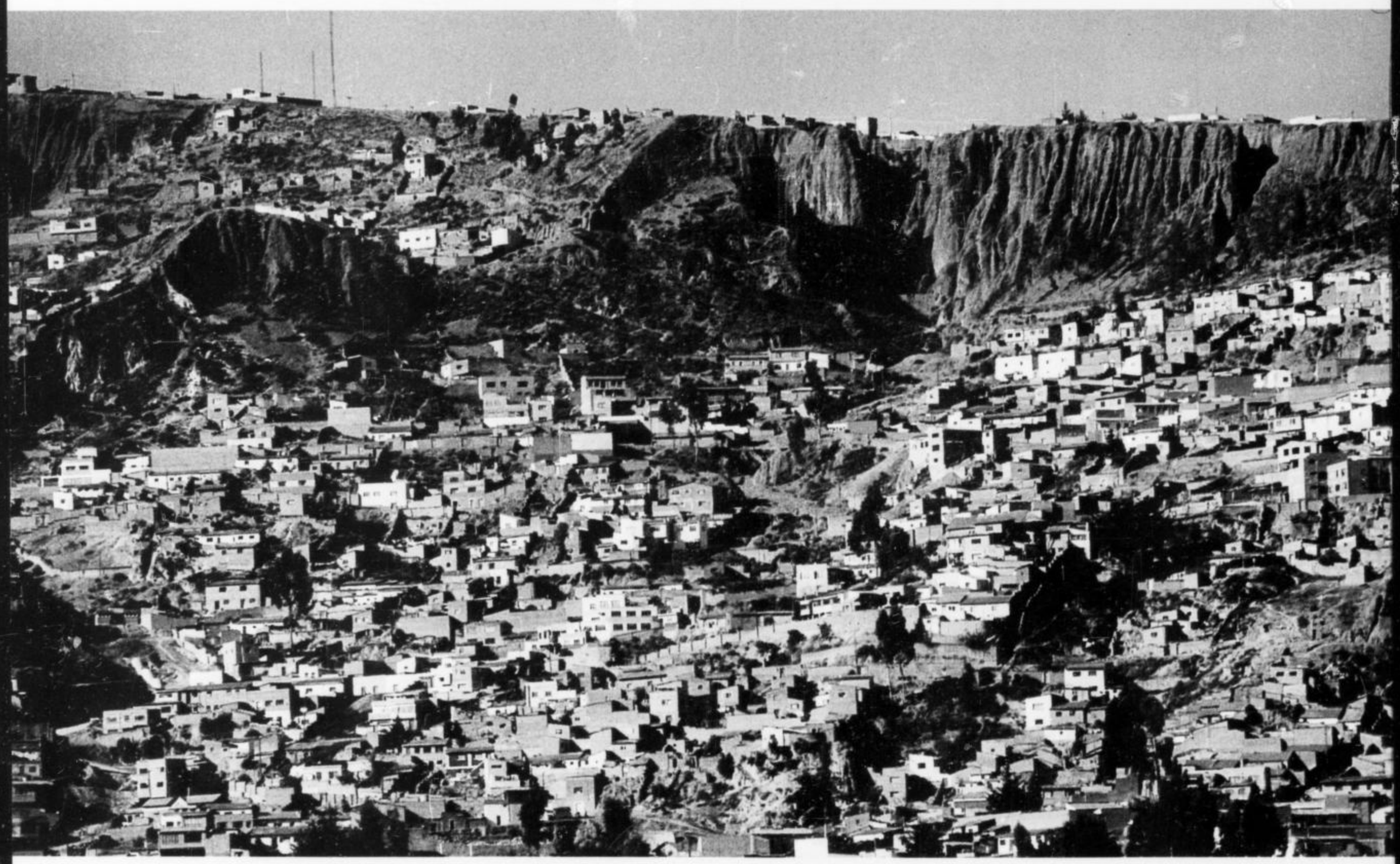
The urban experience

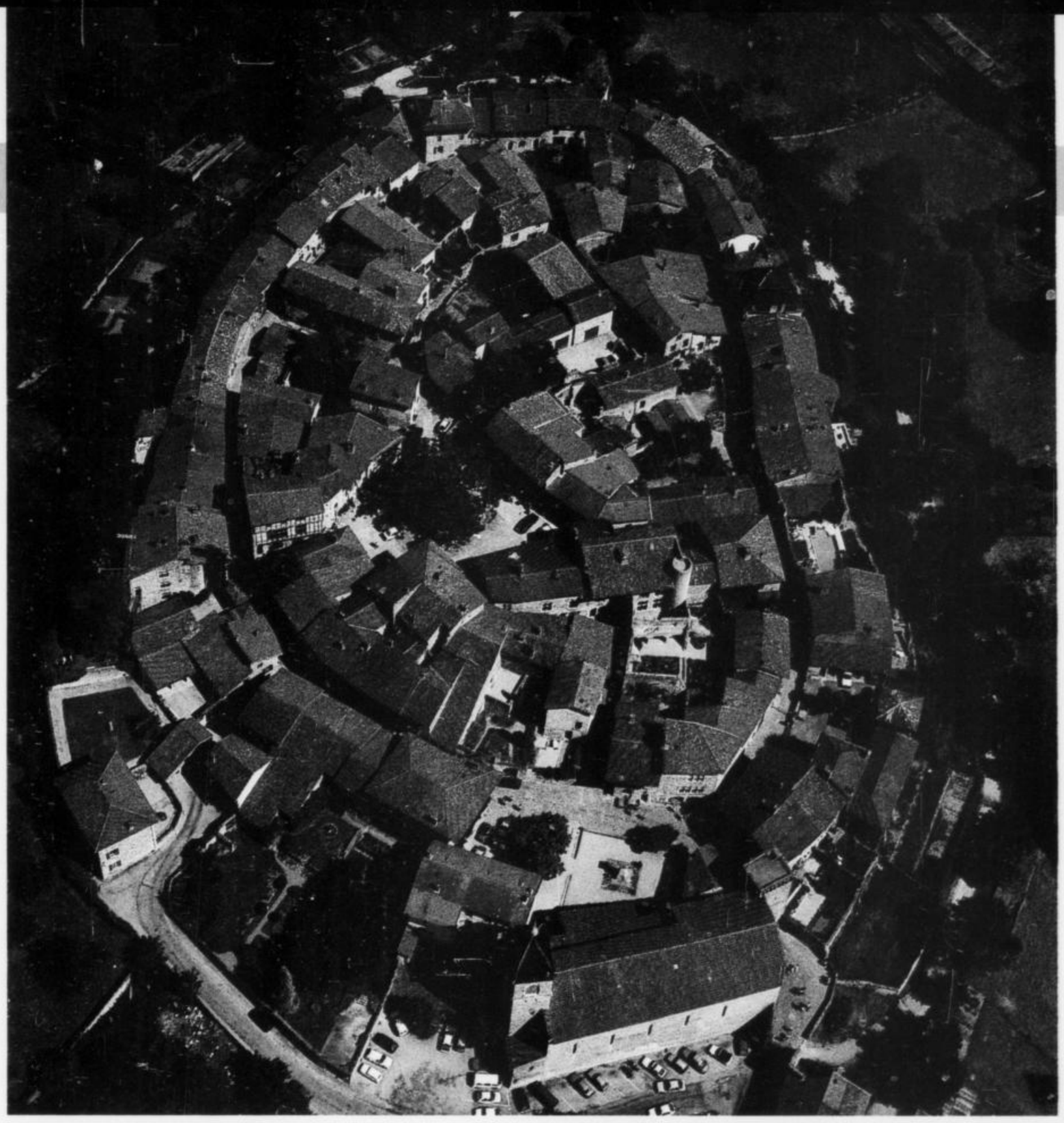
by Wolf Tochtermann

Are urban decay and a declining quality of life the inevitable consequences of rampant growth in the world's burgeoning cities?

A town or city is essentially a place where men and women work, move about, meet one another, improve their minds and amuse themselves. Obviously the range of opportunities it offers is proportional to its size, the number of its institutions, and the intensity of its economic, commercial, social and cultural life.

But the inhabitants of cities all have different perceptions of the urban environment in which they live, depending on their origins, their education, their professional concerns and their ambitions. For many people the city is simply somewhere to live, a place of work, and the journey between the two; while others regard it as a far more complex environment offering much greater scope.





Opposite page, the mountainous site of La Paz (Bolivia).
Left, the spiralling streets of Pérouges, a village north-east of Lyon (France) which dates from the Middle Ages.
Below, Toronto (Canada), an example of the urban grid pattern.

For the mayor and the municipal councillors a city is primarily a political entity posing management problems that need to be solved in the interests of its population. It is also a place that calls for leadership, in the sense of putting forward or encouraging projects likely to give it a character of its own and differentiate it from other cities.

Urban planners see the city as a sphere of operation that makes demands on their knowledge and experience in the organization of built-up areas. They seek to bring order to chaos and give shape to the urban fabric, and they are usually convinced that their work responds to users' aspirations. Historians of urban planning, on the other hand, see cities in terms of a process of continuous development through periods characterized by successive architectural styles. Each period has its own conception of development, its own ways of exercising power, and its own modes of production, all of which may explain the prosperity of a conurbation or its decline.

Intellectuals, research workers, philosophers and artists find in towns and cities the rivalries and confrontations conducive to creative work and the interplay of ideas they need to stimulate their imagination. One scholar even worked out that he needed a city with a population of at least one million in order to find the five or ten people essential to the progress of his research.

A covered street in Ghadamis (Libyan Arab Jamahiriya). Opposite page, detail of the recently built Institute of the Arab World, Paris.

For people who live in the countryside, cities are magnets. With their opportunities for material gain and entertainment they hold out a promise—or a mirage—of a better life, and so have led to an exodus from the land whose scale has varied at different times. This migration was particularly substantial in the nineteenth century, when it was justified in the sense that jobs and pay were more attractive in the towns than in the country. Today, especially in developing countries, towns and above all the major conurbations still attract rural people even though there is no longer any work, at any rate in the formal sectors of the economy. Yet even though they do not enjoy the privileges of city life, migrants still hope that by settling in an urban area they will manage to move a step or two up the social scale.

Why some cities grow and others lag behind

It is usually hard to ascertain the origins of a conurbation, and the factors that have helped or hindered its development down the centuries are often obscure. Why should one city have become prominent while another with the same advantages have lagged behind and developed less extensively or less quickly? The reasons may not be exclusively economic, although many towns did start from a favourable situation at the junction of trade routes, along a river or at the site of a natural harbour. But a town or city might also be founded by the decision of a temporal or spiritual ruler, or as a result of the discovery and working of natural resources or the setting up of an industrial plant. These factors often coincide and generate a dynamic conducive to urban development.

Many urban planners make a distinction between the "traditional" towns and cities, which developed organically, and "planned" towns and cities created by the decision of a ruler or government, but this distinction is not as clear-cut as is claimed. Medieval cities were unplanned, but this did not prevent them from being thoroughly organized; and twentieth-century new towns, though planned, are usually not truly urban in character.

Traditional cities, which have developed organically over the centuries, have a certain homogeneity as a result of their structure, the uniformity of their building materials, and the human scale of their narrow streets and open

WOLF TOCHTERMANN
is in charge of Unesco's human settlements programme. A specialist in urban problems and town planning, he is currently concerned with a project entitled "The future of cities in the face of social and cultural challenges: ways of organizing and improving the living conditions of disadvantaged population groups". He is writing a book on this project, which will be published by Unesco in 1992.

spaces. Some people think that such growth owes nothing to urban planners or administrators, forgetting that these towns conformed to the standards of their time and that cathedrals, castles, fortresses, ramparts and other monuments were the result of a collective effort. It is true that many of their inhabitants were fated to live in penury and without any kind of comfort. Noise, dirt, insecurity, difficulty in obtaining supplies and the threat of epidemics were the normal conditions of urban life for centuries.

Planned towns and cities have existed in most parts of the world. The ideal cities of the Italian Renaissance, Baroque cities, the Spanish cities of Latin America, Beijing in China and Jaipur in India all stemmed from steps deliberately taken by rulers who wanted to control not only the shape but also the destiny of their cities.

Many cities were remade in the eighteenth and nineteenth centuries because of explosive population growth and the migrations brought about by the Industrial Revolution. Regular and often rectangular layouts were juxtaposed with traditional urban ground plans. The extensions of Barcelona and Berlin, and the street plans of Washington, New York, Chicago and Canberra strikingly demonstrate the difference between an organic urban fabric and a city whose shape and functions have been determined from the outset by rigorous planning.

Many architects and urban planners, convinced that they could solve the social as well as the architectural problems of cities, have drawn inspiration from the industrial towns and cities that are so characteristic of the twentieth century. Under the dictatorships the monumental had to make way for the colossal, and a disturbing variant of the planned city made its appearance. The Berlin development plan drawn up by Albert Speer at Hitler's request in 1937, and the Bucharest plan put forward by Ceausescu in 1981 in the name of "urban systematization" entailed ruthlessly gutting the existing cities and implanting in them urban structures that were alien to their original character and revolved around the centres of power.

Many countries, especially since the 1950s, have embarked on plans for new towns in order to relieve congestion in cities and focus growth on particular points. In some cases capitals have been built to give a country or a region a new identity. Two of them, Brasilia and Chandigarh, are world famous, notably for their spectacular architecture. Other countries such as Nigeria and the United Republic of Tanzania have also begun to build new capitals. It will be interesting to see how they turn out, for makeshift dwellings are already proliferating around them.

Urban decay

In industrialized countries urban decay is leading to a disintegration of the urban fabric, especially in those cities that are witnessing the disappearance of once-important economic activities. Several mining and industrial areas in Europe and the United States have been affected by this phenomenon, the signs of which are patches of waste ground, derelict industrial estates, and disused buildings—a breeding ground for social problems such as unemployment and delinquency.

In developing countries the rural exodus and vigorous population growth are leading to the accelerated urbanization deplored by demographers, by urban planners and especially by local administrators. No arrangements are made to receive the people who flock in from the country, attracted by the possibilities of city life.

***Street News*, a New York newspaper for homeless people launched in November 1989. Published fortnightly, it is sold in the streets by the homeless themselves.**

They are unfortunately obliged to look after themselves as well as they can on the outskirts of the cities, on insalubrious pieces of land or dangerous slopes, where they gradually erect makeshift accommodation in districts that are not without cohesion but are desperately short of infrastructure, facilities and services.

Their presence is resented by the city authorities and the rest of the urban population. Squatter settlements, *barrios*, *favelas* and *bidonvilles* (shanty towns) are generally regarded as a blight on the face of a city, and their inhabitants as delinquents, intruders or undesirables. What tends to be overlooked is that in many cities they now represent the bulk of the population.

Municipal authorities usually accept that it is no longer feasible to evict these people from the sites they have illegally taken over—especially since the construction of subsidized housing does not solve the problem of the influx of newcomers. Moreover the public purse can no longer afford operations of such magnitude.

The quality of life is declining in all great conurbations. Pollution, noise, the constant threat of epidemics or starvation, rising crime rates and a chronic shortage of public facilities are the price to be paid for rampant urban growth. The situation seems unlikely to improve in the next few years. In a world that will become increasingly urbanized, the role played by architects, urban planners and designers will, sadly, continue to be insignificant.

Towns and cities, especially in developing countries, are becoming the end product of "informal" planning, the process whereby people take possession of a piece of land, settle on it and build modest shelters there. Some sociologists regard this as the beginning of a new urban culture, born of the traditions of historic towns and cities and of a so-called "vernacular" architecture—an architecture without architects.

We do not yet know whether this new urban culture will take root, but we do already know that towns and cities in poor countries will continue to grow without any overall urban planning. ■

Stark urban contrasts in a residential district of Bangkok (Thailand).

Citizens who help themselves

by Jorge E. Hardoy and David Satterthwaite

To provide themselves with shelter, low-income families in Third World cities often have to take the law into their own hands

SOME 1,300 million people today live in the cities of the Third World, an urban population larger than that of Europe, North America and Japan combined. Over the next ten years this figure is likely to grow by around 500 million. While governments and aid agencies discuss strategies, the population of cities such as Karachi and Bombay will grow by over 300,000 a year, that of São Paulo by over 400,000 a year, and that of Mexico City Metropolitan Area by over 500,000 a year. Tens of thousands of small urban centres will also experience rapid population growth.

Despite enormous differences between the societies, cultures and economies which build and shape them, these cities are becoming more similar in appearance today than they were during colonial times when they were founded—although in many of them life is still shaped by a strong colonial legacy in the form of legal systems, institutions, land ownership patterns, tenancy systems and poorly developed structures of local government. Since the 1950s, a combination of a rapidly growing low-income population and a scarcity of government investment in

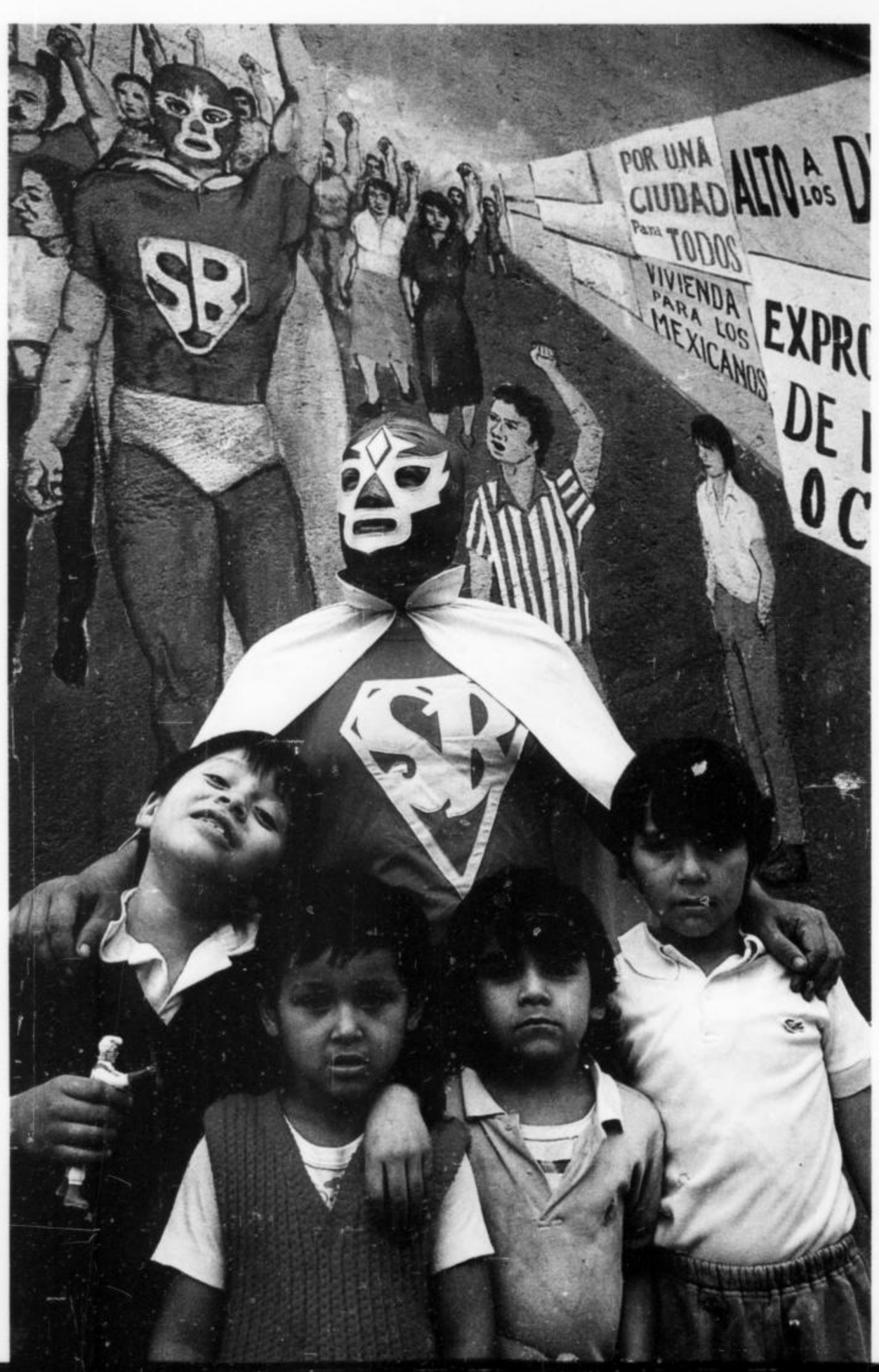
construction and maintenance has produced urban forms that look increasingly alike. Third World cities in different continents have many common features, including the intensity of their street life and the dense use of space in their central districts and in most residential areas.

Most people who live in Third World cities cannot afford a conventional house or apartment. They buy, build or rent housing in the illegal settlements which surround the pockets of official, legal architecture and are spreading to ever growing distances from city centres. Many of the things they do contravene laws or regulations relating to shelter, work and even the food and water they consume and the medical services they use. They cannot afford to obtain these facilities legally.

Most illegal settlements are built by the people who live in them. Virtually all of them are dusty, densely populated, without trees, lacking paved roads, adequate supplies of water, drains, and even schools and rudimentary health centres. Dwellings which outside observers may call a shanty town provide a home for between

a third and two-thirds of the inhabitants of most Third World cities.

Below, *SuperBarrio*, the masked defender of victims of the 1985 earthquake that left over 300,000 people homeless in Mexico City. This colourful character, a self-appointed champion of popular causes, leads demonstrations and campaigns in support of the homeless who are fighting to obtain housing credits from the authorities.



Government strategies and people's needs

Until relatively recently, the transformation of cities has usually been determined by powerful men and technocrats whose actions were supported by only a small minority of society. Many of the assumptions used to justify the decisions of these rulers have been unrelated to society's needs, disguised under pretensions of a long-range view of future national and urban development. Rulers have been known to reshape cities and order the eviction of tens of thousands of families to "beautify" the more visible districts. Such examples of the divorce between the basic needs of a society and the grand strategies of a ruler abound in the history of urbanism.

Many "new cities" in the Third World have been planned according to Western norms and

Above, modern apartment blocks overlook makeshift shelters in Bombay (India).

fashions and built parallel to existing indigenous cities with long histories. They have drawn little from the culture and society in which they were implanted, and their avowed purpose of separating the rich and powerful from the poor majority reveals the élitist principles on which they were based.

Poor people's needs have too often been ignored—whether in planned or unplanned cities, new cities or projects to expand old cities. Although it is often suggested that the policies and expenditures of governments and aid agencies have an "urban bias", very few of the urban poor benefit from it. Burglaries, muggings and the ransacking of supermarkets and pharmacies have become more common, as the price of food and medicine rises far more rapidly than incomes. Recession and economic crisis are the reasons usually cited to justify neglect of the basic needs of the poor. In earlier decades too it was said that meeting this goal should be postponed until the economy was performing more successfully.

Why urban problems deserve more attention

If current trends continue, the majority of Third World city-dwellers will go on leading lives of privation, millions will die prematurely every year, and hundreds of millions will continue to suffer from ill health or disablement, most of which could be prevented with a very modest outlay. Hundreds of millions will be deprived of dignity if they are unable to obtain the credits and resources to allow them to acquire a home and enhance their own living conditions and, in so doing, encourage their incorporation into the social and economic life of each nation as full citizens.

Urban problems also deserve more attention because city-dwellers will play a vital role in the political future of Third World nations. Hundreds of millions of urban people want to participate fully in the political lives of their countries. The alternative between democracy and

dictatorship will be largely determined in the cities.

Urban centres have important economic functions, although these are often misunderstood. Urban workforces and enterprises make a substantial contribution to nations' Gross Domestic Product (GDP)—usually a far higher share than the proportion of the population living in cities. Much of this economic dynamism draws heavily on what outsiders have labelled the "informal" or "black" economy. Informal activities constitute the sole source of income for tens of millions of urban households in Africa, Asia and Latin America.

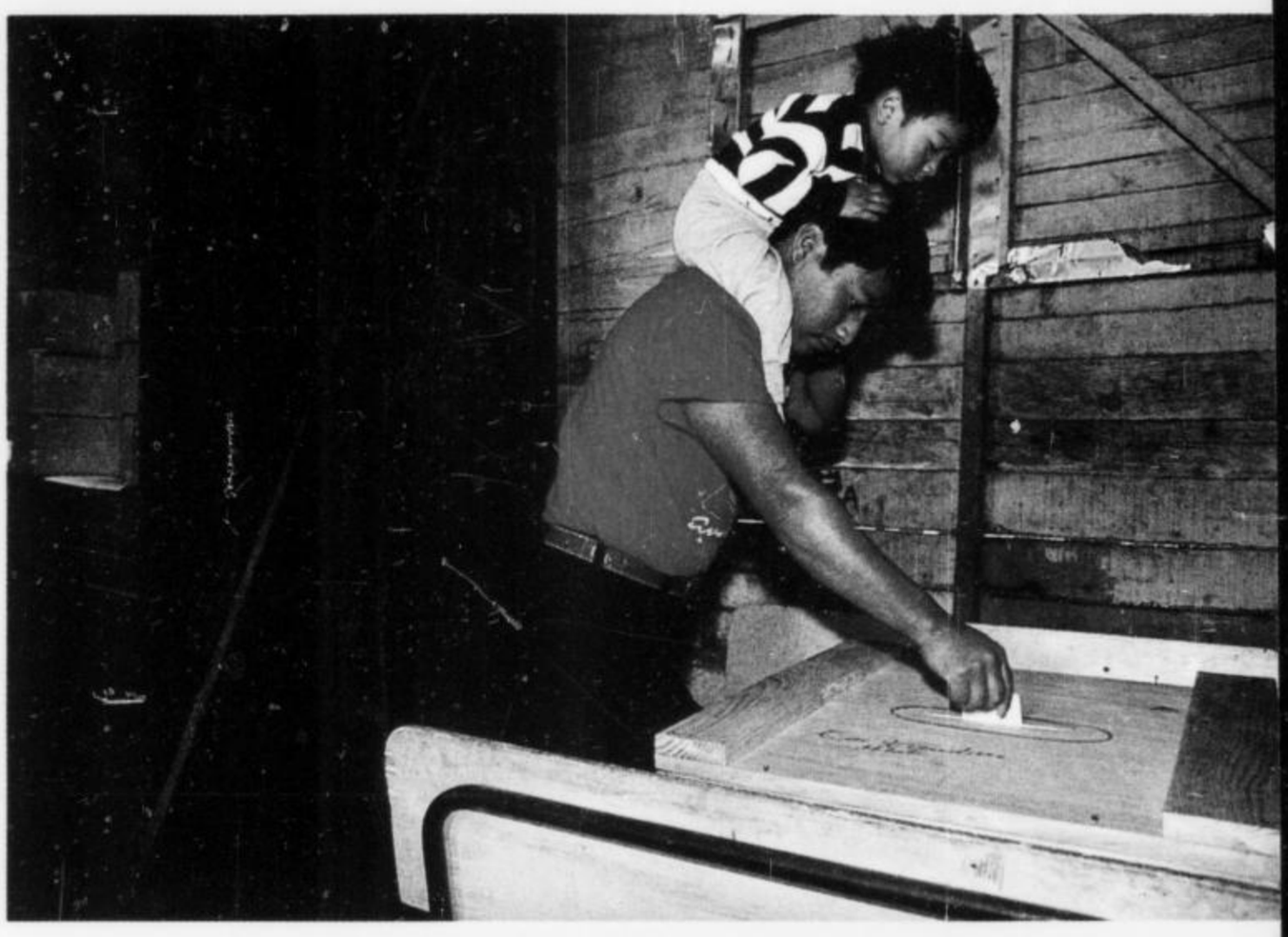
One reason why government policies for managing urban growth and improving living conditions have achieved such poor results is that governments do not properly understand how cities function, how needy individuals and households earn an income, how different social groups use their time, and how the family and community organizations can play a role. Human lives will not be saved and health will not be improved if most government funds are spent on expanding bureaucracies while leaving hospitals and health centres without basic equipment and supplies.

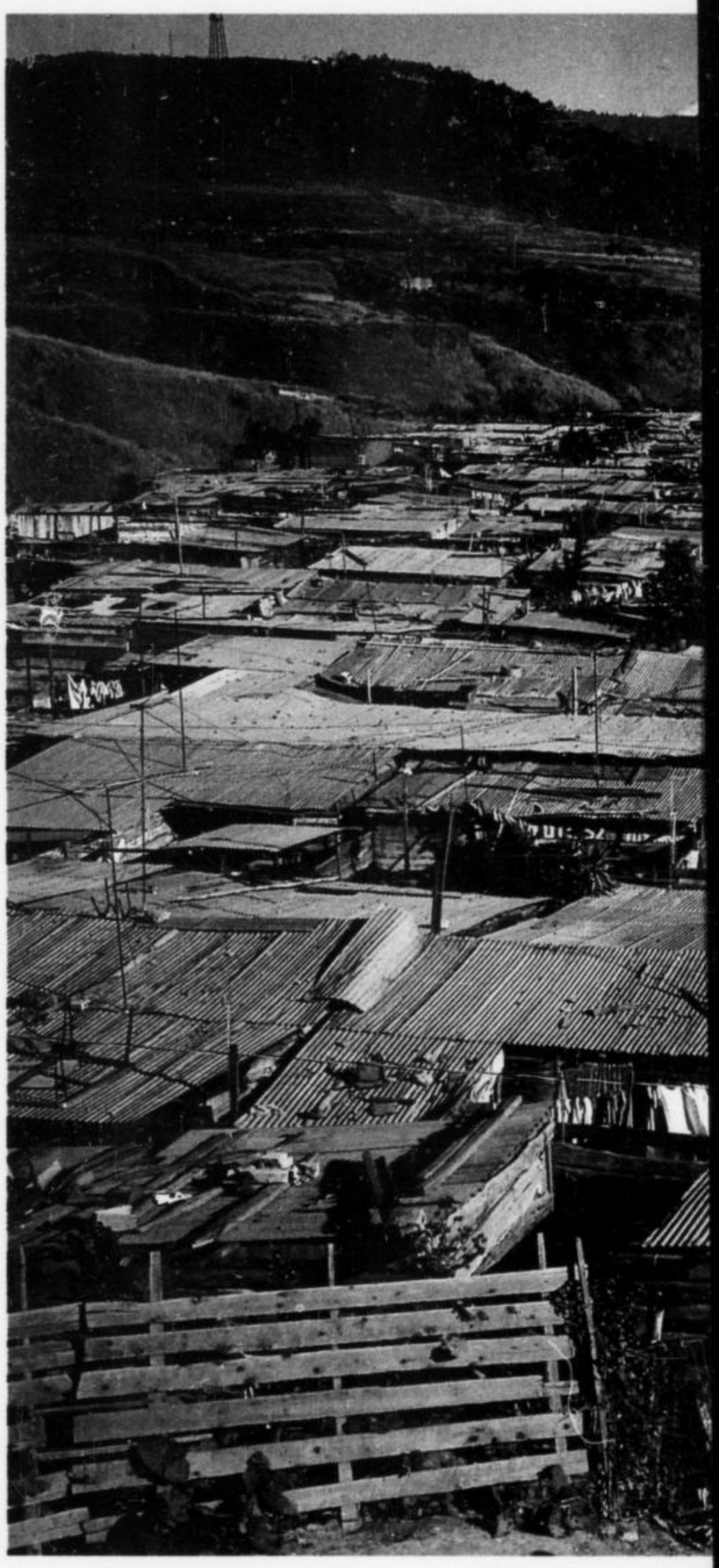
If governments were to adopt new approaches, basic needs could be met at relatively low cost. Water supplies, provision for sanitation, drainage and garbage collection, street paving, health care systems and the like can be provided cheaply and effectively if local knowledge, skills and resources are used, and municipal governments work in partnership with low-income groups and their community organizations. The channelling of more resources to meet the needs of poorer groups does not necessarily imply a diversion of funds from rural to urban areas but rather a better use of existing resources.

The city of the future

The future cities of the Third World will be very different from those we have known and thought we understood. They will be different not only in size but also in cultural values, codes of conduct and in age and labour structures. There will be massive numbers of children and adolescents in virtually all of them, at least in the next two decades. This will bring to urban life a mixture of aggressiveness and solidarity, of expectations and frustrations which only a new style of leadership and governance can channel towards the development of more equitable places for all to live.

There is clearly a need to develop new forms of local government within new processes of decentralization and democratization. Metropolitan governments or new types of city-region governments are also needed for the larger





Right, in the shanty town of Mezquital, 13 km from Guatemala City, 25,000 peasant families are crowded into corrugated iron and cardboard shacks. Above, election of delegates to the neighbourhood association responsible for seeking legal title to land occupied at Colonia de La Nueva Esperanza, the most heavily populated district of Mezquital.

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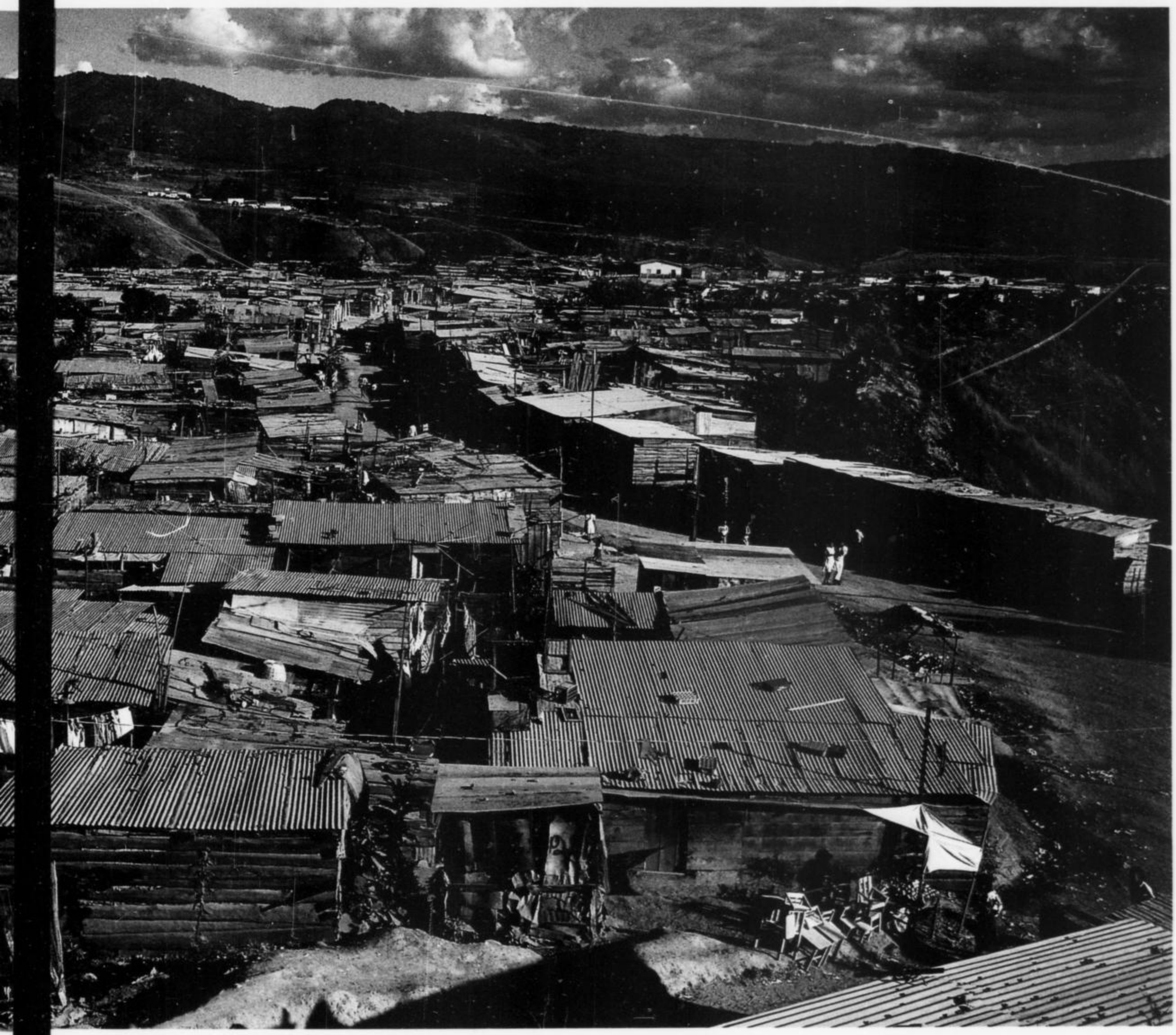
DAVID SATTERTHWAITE,
British historian and development planner, is a researcher who works with IIED in Buenos Aires and in London. He has published several books with Jorge E. Hardoy, including *Squatter Citizen: Life in the Urban Third World* (Earthscan Publications, London, 1989) and *The Poor Die Young: Housing and Health in Third World Cities* (edited with Sandy Cairncross, Earthscan, forthcoming).

agglomerations. One priority is to redefine the scope of current legislation which at present deems illegal hundreds of millions of squatters, informal workers and traders.

Decision-makers must accept that their projects should be guided by the priorities of low-income citizens and implemented under their supervision. Power, resources and trained personnel should be decentralized in a new collaborative framework so that local government can respond directly to demands from low-income neighbourhoods. Of course city and national governments must provide a broad planning framework. Such a framework does not imply a diminution in the role of government, but a different role—more developmental, more activist, more decentralized and more representative. The unco-ordinated efforts of dozens of local governments and hundreds of community organizations would produce chaos in any city for transport planning and major infrastructure investments.

The 1990s are beginning with global discussions of common causes. Sustainable development with a priority to protecting the global commons is receiving most attention. These discussions are encouraged by the ending of the Cold War and detailed discussions about nuclear disarmament. But how long will peace be possible and how can environmental degradation be avoided in regions where there is mass poverty? Let us hope that the 1990s will concentrate on saving human lives, eliminating easily preventable suffering and disease and restoring dignity to the lives of the many millions who live in poverty. This should be the first goal of sustainable development. ■



The threats to historic city centres range from war to ideological dogma, property speculation and the pressure of demographic growth

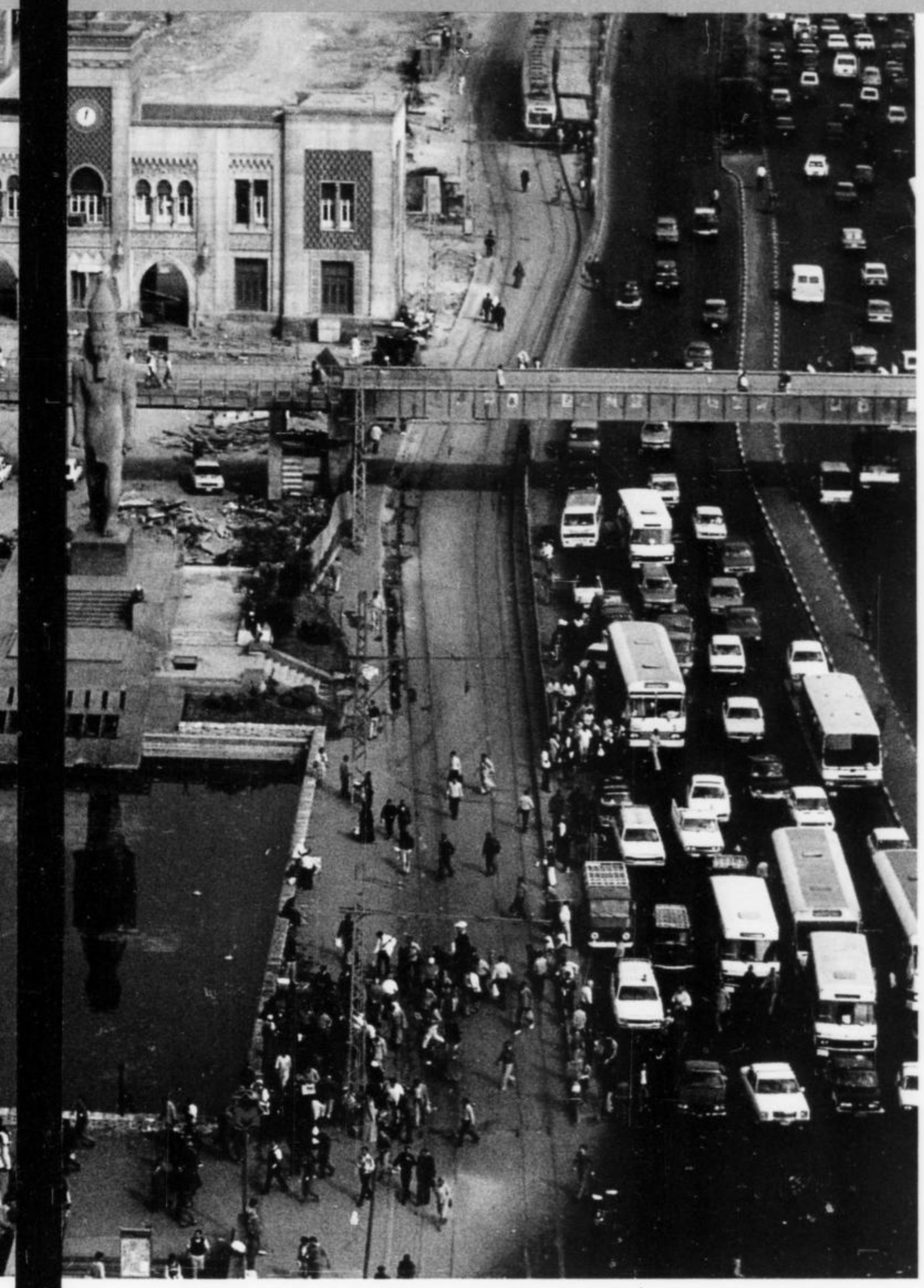
A new heart for old cities

by Stefano Bianca

In the pre-industrial era the development of towns and cities was a slow process governed by enduring cultural values and only slightly influenced by the very limited technology then available.

Some absolute rulers completely remodelled their cities; others built entirely new ones. But such cases were few. Cities were sometimes transformed for religious reasons, and as a result acquired a special significance which was recognized by everyone. But in spite of apparently radical changes in architecture and the use of space, there was always a thread of cultural continuity.

The advent of the industrial era in the early nineteenth century created an entirely new situation. As a result of technological progress,



A highway under construction (now completed), in central Cairo.

human creativity and the innovatory spirit acquired new scope for expression in building and urban planning. New means of communication and production and new ways of living made an indirect but powerful contribution to these processes. Built-up areas expanded to an extent that would once have been inconceivable. Technology became a driving force and began to play a role that had once belonged to culture and religion. Change became explosive, coupled as it was with new economic mechanisms which were themselves at odds with traditional cultural values and obeyed only the laws of profit or speculation.

European cities suddenly began to grow under the impetus of new forces, the rise of new social classes and hierarchies. With the expansion of the suburbs, the levelling of old city walls and fortifications and the construction of wide boulevards, a new concept of the city began to emerge. It differed sharply from the traditional concept of the city, where development had often been haphazard.

The old districts of towns and cities were then regarded not as places of historic value but as the insalubrious areas in which the poorest members of society, the early industrial proletariat, found refuge. The prosperous middle class lived in buildings which lined the new boulevards and in residential areas on the outskirts.

The ravages of war and utopian ideas

This polarization, and the class divisions that went with it, existed all over Europe until the mid-twentieth century. In the 1920s and 1930s many modernist architects argued for the destruction of the old districts. The most important of them was probably Le Corbusier, whose "Radiant City" plan for Paris would, if executed, have sacrificed much of the existing city in favour of a series of skyscrapers laid out in a geometrical pattern.

These radical proposals came to nothing, but the ideology behind them contributed largely to the obliteration of many historic urban districts in Europe. Then the Second World War came along and flattened some central European cities more effectively than the boldest utopian projects of modern architects could have done.

Following these losses, planned and unplanned, some new thinking began to emerge in the late 1960s. On featureless housing estates whose residents had no reason to identify themselves with their man-made environment, the standardized "machine for living" revealed all its defects. Moreover, a growing awareness of ecological issues gradually led to a revision of the

dominant concepts in architecture and urban planning. Meanwhile, the increasing scarcity of "historic resources" in big cities obliged local authorities and architects to treat the surviving historic fabric with greater consideration.

As often happens in such cases, the pendulum swung to the opposite extreme. Legitimate concern for conservation was accompanied by excessive zeal for the protection of ancient monuments,

Left, book sellers in the suq at Damascus (Syrian Arab Republic).
Below, a dangerous tangle of electricity and telephone cables in a corner of the old city of Peshawar (Pakistan).

and this hindered any creative approach to the renovation of even the most ordinary buildings. Strict rules were applied, especially to the restoration of façades. When the interiors of buildings were completely restored, the old frontages were meticulously preserved for the sake of appearances.

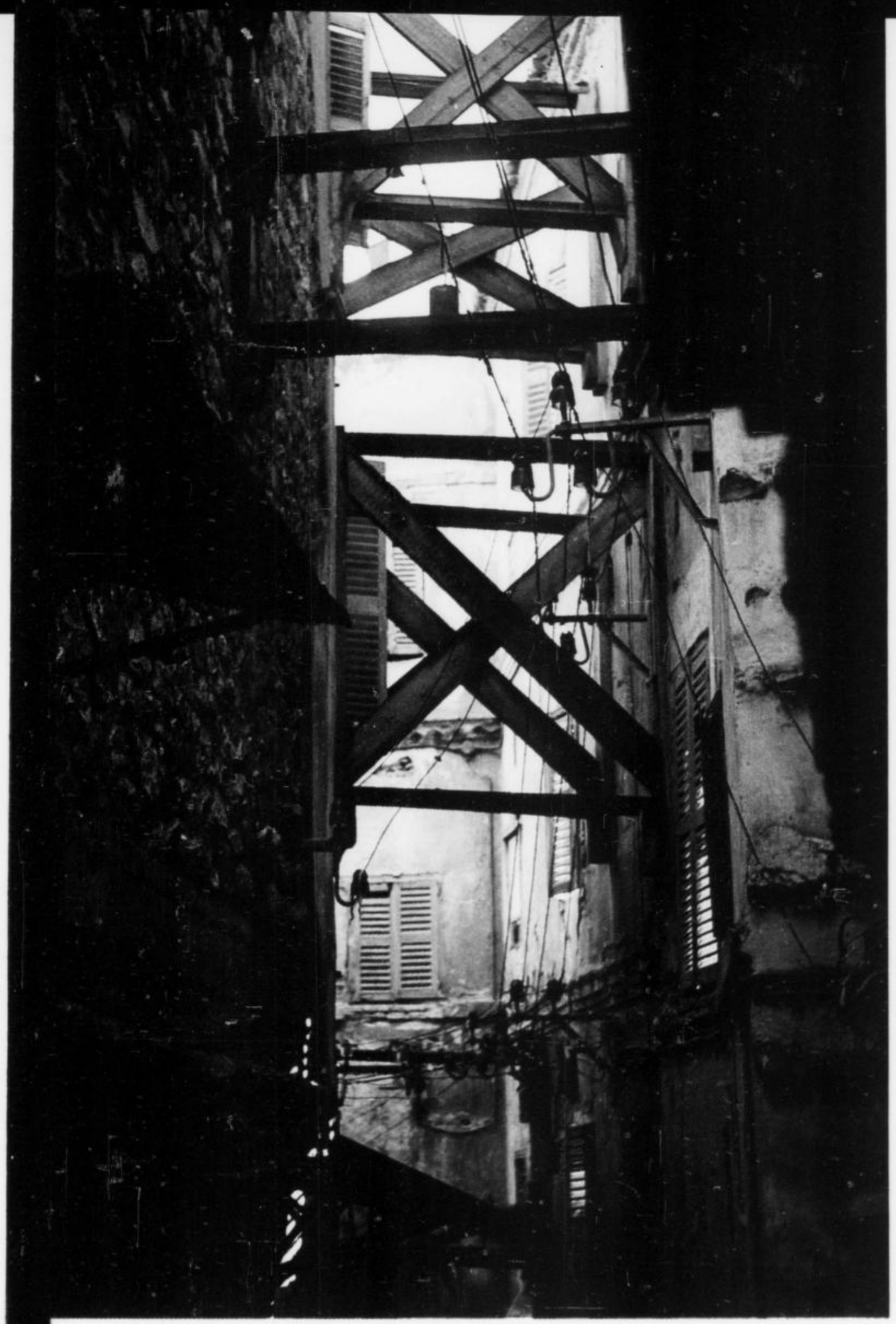
A good example is the old city of Berne (Switzerland), where the façades of older buildings provide the frontage of modern department stores. Such changes of function are encouraged by the rapidly growing trend for inner city renewal. Pedestrian areas in historic districts, once shunned by traders because of their inaccessibility to motor traffic, have become gold-mines overnight.

Thus run-down urban areas began to be gentrified in a rehabilitation process that has some positive features but, like the former process of slum-formation, brings new social problems in its wake. Only a few cities, such as Bologna in Italy, have managed to preserve and gradually rehabilitate their old centres without the original inhabitants being driven out by property speculation.

The historic districts of Third World cities

The problem of old towns and cities is even more acute in developing countries, where the great wave of modernization came not in the nineteenth century but in the 1950s and 1960s, usually around the time when political independence was achieved. The colonial cities of the nineteenth century were the points at which modern civilization gained access to these countries, but they also formed a closed social system, which had virtually no contact with the indigenous communities. This social dualism only collapsed with the ending of colonial rule, when a rising indigenous class began to settle in the abandoned colonial cities.

In societies eager for progress, the modern "European" areas of these cities are regarded as the most desirable urban environment. The old urban districts, like those of nineteenth-century European cities, decayed and turned into slums. Population movements in recent decades, largely the result of a massive rural exodus, have accelerated this process. The prosperous classes have moved to the newer parts of the city, and a flood of rural migrants has descended on the old districts, which (together with the shanty towns on



Wooden scaffolding prevents these buildings in Algiers from collapsing.

the outskirts) were the only sources of cheap accommodation and job opportunities in the so-called informal (i.e. pre-industrial) sector of the economy.

The historic districts of Third World cities have thus survived to a large extent as isolated pockets of pre-industrial traditions and customs in the midst of a rapidly modernizing world. Rural migrants have found in them ways of life resembling those they knew. The threat to these districts is that the influx of people leads to overcrowding, with several families often living in one house, and sometimes in a single room. Many old houses, stables and even cellars, abandoned by their owners, are used for unauthorized small businesses and as craft workshops, supplying the local market at a very low cost but in deplorably unhygienic conditions.

Historic buildings used in this way soon fall into ruin. In the maze of narrow streets of the old districts, houses are often difficult to locate, and from outside it is sometimes even impossible to suspect their existence. This hinders any surveillance of undesirable or illegal activities. Sanitary arrangements are also inadequate. The water supply and sewerage networks generally no longer meet current needs, and traditional systems (where they still exist) are dilapidated or obsolete.

This situation must be remedied if living standards are to be improved and a responsible middle class brought back into the old districts. For whereas major monuments can be restored only by the authorities, the upkeep of a city as a whole needs support from private initiative. Here another problem arises: material improvements call for substantial investment, usually beyond the available resources, which in any case tend to be allocated to "modern" districts.

Projects for the renovation of historic urban areas should not be governed by the same criteria as those applied to modern cities—to do so would be to deprive historic areas of the very quality which justifies big investments. Renewal schemes must scrupulously respect the morphology of the old districts. Unfortunately there have been many ill-considered redevelopment operations which have defeated their own object. Major roads have, for example, been driven into a number of old city centres. Some of these schemes have been well-intentioned, but they have ignored the vital needs of the traditional city life and paid little heed to the manifold social, economic and aesthetic consequences of purely technical solutions.

Those responsible for the renovation of historic neighbourhoods must ask themselves whether imported methods of modern urban planning are appropriate, and devise solutions suited to local situations. Such solutions can only be based on a thorough knowledge of traditional urban structures and their internal economy.

The conservation and revival of historic districts must likewise be considered in the overall context of the city. While a single notable historic building can be treated like a museum and preserved, an old city that may be inhabited by hundreds of thousands of people cannot. Human dynamism must be mobilized to revitalize the architectural shell and save it from decay. A planner's first task must therefore be to strike a balance between meticulously restoring buildings and gradually adapting them to current needs.

STEFANO BIANCA,
Swiss architect and urban planner, has directed many restoration projects in the historic districts of Arab cities such as Aleppo, Fez, Baghdad and Riyadh, and has worked with Unesco at Fez, Cairo, Damascus and Sana'a. He is the author of a number of books on Islamic architecture, the most recent of which is *Hofhaus und Paradiesgarten* ("Courtyard and Garden of Paradise", Beck Verlag, Munich, 1991).

The mutilation of Bucharest

by Matei Lykiardopol

MATEI LYKIARDOPOL,
Romanian architect, teaches at the Bucharest Institute of Architecture. He has published a number of articles and papers on urban settlements.

BUCHAREST, a city of contrasts at the crossroads of Byzantine and Western European civilization, is no stranger to destruction. It has seen invasions by the Ottoman empire, by Russians and by Germans, as well as natural disasters such as earthquake and fire. A small number of churches, monasteries, aristocratic residences and other monuments survived these perils. A network of streets in the centre of the old city, lined with buildings dating from the seventeenth and eighteenth centuries, also lasted until 1977.

These monuments, whose historic and cultural value was enhanced by their rarity, were concentrated in the Uranus and Văcăresti districts of Bucharest. They bore the brunt of the campaign of destruction unleashed by the dictatorship in order to make room for a monstrous "House of the People" which would be the new seat of government. This vast edifice was to dominate a new triumphal way symbolically dubbed "The Victory of Socialism", although to the horrified citizens it signified a victory over Bucharest.

Why should this district have been chosen rather than a vacant site? The Romanian historian Nicolae Iorga (1871-1940) answered this question when he wrote that "The first thing that every conqueror of a city does is to annihilate the ancient symbolic centre and to replace it with another, in a different style."

In deciding to destroy this part of Bucharest, Nicolae Ceausescu was probably driven by the natural propensity of dictators to appropriate their country's history and rewrite it to their own advantage, to sweep away all traces of a glorious past in order to vaunt their own power and encourage a personality cult.

First of all over 40,000 people were evacuated by the armed forces, sometimes within twenty-four hours and with no compensation (the very small sums they were given later barely covered their removal expenses). They were rehoused in unfinished apartment blocks on the fringes of the city. Many deaths and suicides ensued.

The construction of Bucharest's new "civic centre" also entailed the demolition of the Ypsilanti palace, built in 1776, and the eighteenth-century Brîncovenesc hospital. Eighteen churches and monasteries were destroyed. Eight others, including the Mihai-Vodă church dating from the sixteenth and seventeenth centuries, were dismantled and moved to restricted areas behind rows of tenements.

Similar operations were carried out elsewhere in Bucharest as part of grandiose construction schemes. Much of the Stirbey-Vodă district was sacrificed to make way for a history museum on a highway intended for parades and ceremonies, and a new law court and a congress hall (to accommodate 30,000!) were erected on the site of the Văcăresti monastery, an ensemble of seventeenth-century architecture that was unique in southeast Europe.

Under the pretext of solving tram, subway and automobile circulation problems, wide swathes of central Bucharest were razed to the ground, creating worse traffic jams and diverting vehicles into streets that lead nowhere and intersections that it is impossible to cross.

The construction of the "civic centre" finally confirmed the bankruptcy of the new city project. Launched forty years ago, this project has spawned acres of barrack-like blocks in dormitory suburbs where the public transport system is hopelessly inadequate and there is a woeful lack of health, cultural and sporting facilities. To cap it all, the development of the new city led to the process known as "systematization"—a euphemism employed to describe the destruction of nearby villages.

What can be done to remedy so many errors? Where should we begin? Who can help us? Unfortunately, equally serious mistakes—all fraught with human and material consequences—have been made in the economic, social, cultural and political fields. The task that lies ahead is immense.

One thing is beyond question. Any temptations towards totalitarianism must be resisted and everything possible must be done to strengthen democratic institutions. ■

Opposite page, the "House of the People" towers over the ruins of old Bucharest. Below, the Domnita Balasa church, surrounded by apartment blocks, is one of the few historic buildings still standing in the city centre.

Right, Lomonosov Street in central Leningrad.
Inset, the Griboyedova Canal, Leningrad. In the background is the church of the Resurrection (1883-1907).

OLGA NOSAREVA,
of the Soviet Union, is a journalist with *Tchas Pik* ("The Peak Hour"), an independent Leningrad newspaper. She writes extensively on problems of the environment and the cultural heritage and is an active member of conservation movements.

Can Leningrad be saved?

by Olga Nosareva

In 1703, Peter the Great founded the city of St. Petersburg at the mouth of the Neva river. In 1914, the city was renamed Petrograd, and since 1924 it has been known as Leningrad.

The Tsar wanted his city to be an ideal capital, a Venice of the North. For two centuries, successive generations of architects worked to translate his dream into reality. They built a city of extraordinary beauty and fantasy, rich in architectural detail, palaces and museums. Its layout is clear and logical, its streets and squares are elegant. Majestic waterfront quays were constructed, and the streams and canals were bordered with whimsically designed ornamental railings. The city centre, where half the houses are listed as historic monuments, covers 46 square kilometres.

But today Leningrad is dying. Within ten or fifteen years its historic centre will have entirely disappeared. Over 30 per cent of the public buildings and private residences built by both European and Russian architects are or soon will be in ruins.

This once glittering capital is today a wretched sight. Houses are on the point of collapse. Pavements are full of potholes and strewn with debris from broken cornices and railings. There is a general air of dereliction. Scaffolding and wire netting protect passers-by from falling bricks and masonry. Some deserted streets look sinister even in broad daylight, with their doors boarded up and their windows broken. No one lives in them any more.

There are many reasons for this decline. In the 1917 Revolution the city's palaces were besieged. Hundreds of buildings of outstanding value were converted into communal apartments. In 1918 the civil war took its toll, and in the 1930s Stalin ordered the demolition of many religious buildings. Then came the Second World War, the blockade of the city and the destruction of entire streets which the occupants took decades to rebuild. In the 1960s a campaign against "architectural superfluity" disfigured many original buildings and transformed them into square boxes.

The years of the Soviet regime ended with the destruction of half the habitable surface area and the disappearance of hundreds of historic and religious buildings. In addition, current restoration work is not managing to curtail the natural ageing process.

Unfortunately many old buildings were given over to administrative use, which rapidly led to their deterioration. Thus the splendid cathedral of St. Vladimir until recently housed a research department, the church of the Assumption was turned into a skating rink, and the Armenian church was used as a warehouse.

The construction of the Leningrad subway system in the 1940s and 1950s did not help matters. For each station—and in Leningrad they are palatial—a row of houses had to be demolished or a green space sacrificed. Several stations were built on sites where churches had simply been dynamited. An obsolete technique which involved freezing the ground was used to build the tunnels. During the work the layers of subsoil expanded and the subsequent irregular subsidence affected the buildings above.

One of the characteristics of Leningrad is that 70 per cent of the buildings of some architectural, cultural or artistic value are inhabited. How can the integrity of their often lavishly-decorated interiors be preserved when they are divided up into the tiny rooms of communal apartments? Most of these conversions are now in an appalling state.

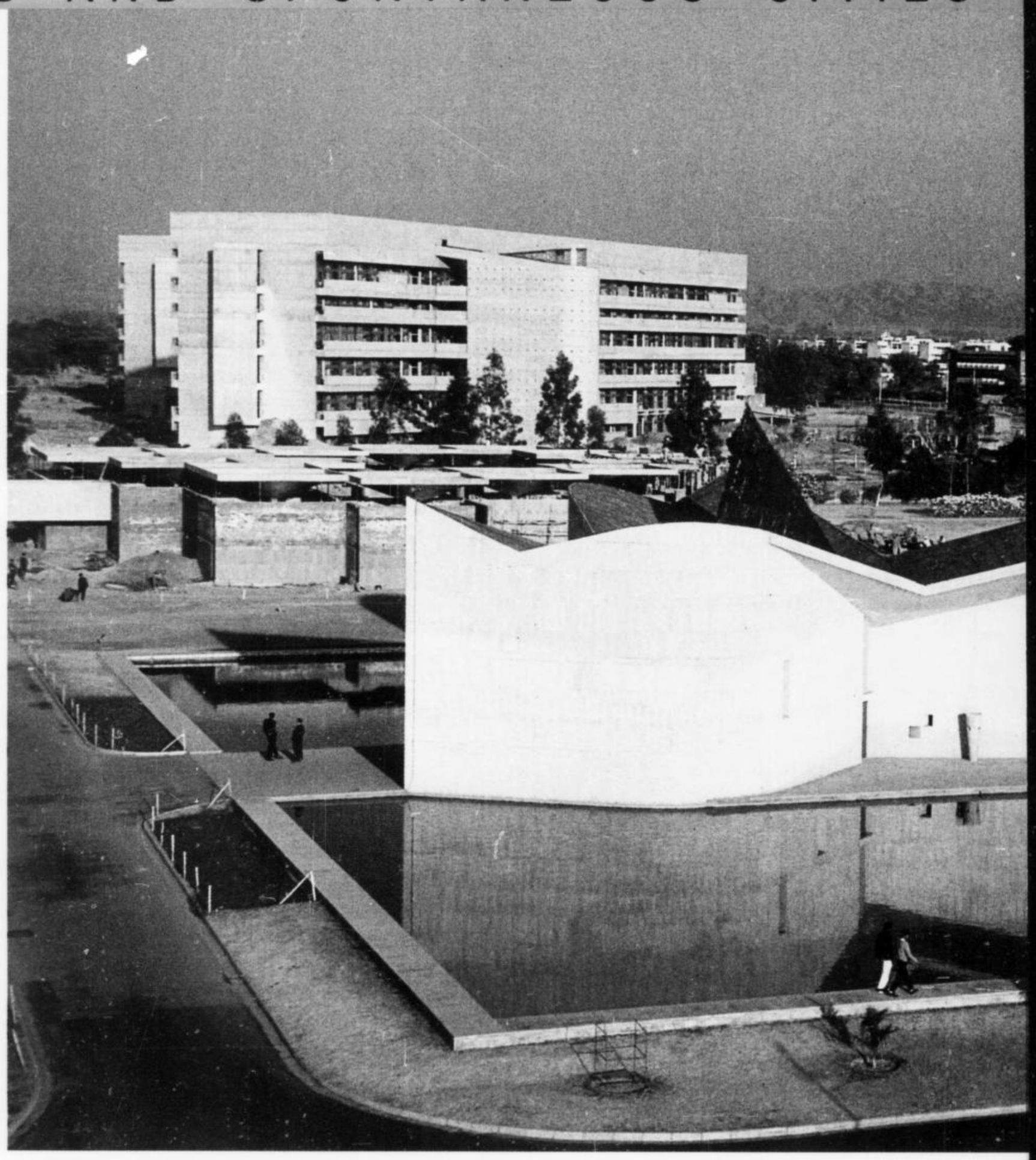
Rather than demolish a building, restoration teams usually prefer to sacrifice the interior by knocking down partition walls and converting the space into small modern apartments. Twenty years of this kind of "restoration" has meant the loss of 150 private residences, of which only the façades remain.

The city also has a major ecological problem. The concentration of pollutant gases pumped out by industry and transport is very much higher than average. Untreated effluent from hundreds of factories pours into the Neva, which provides water for the whole of Leningrad, as well as into the other urban waterways. Not only is the river water undrinkable as a result, but swimming in it has been banned for some time. Controls on the toxic emissions into the atmosphere and the water are virtually non-existent.

Leningrad is perhaps the only city in Europe not to have been provided with a ring road or a bypass. An enormous volume of heavy goods traffic passes through the centre, causing considerable damage. It would be difficult to say which is the worst problem, the traffic vibrations and exhaust fumes, or the indifference of the population to them.

It is not just the city of St. Petersburg (there is some talk of reverting to the original name) which is disappearing before our eyes, but an architectural, cultural and historical witness to the splendour of Russia. Is there still time to save it?

Chandigarh in India is a classic example of a "pre-planned" modern city. Elsewhere, when conventional forms of urban planning have been ineffective, popular forms of urbanism have arisen. Residents have sought participation in urban renewal projects and in some cities of the developing world have organized themselves in self-help communities of squatter-builders **(see page 37).**



CHANDIGARH

A planner's dream

by Roger Aujame

ROGER AUJAME,
of France, is a former colleague of Le Corbusier. In 1948 he worked on the United Nations Secretariat building project in New York, before joining the UN as an expert in the Housing, Building and Planning Section. He later became a Unesco staff member in his capacity as a specialist in educational buildings.

IN November 1950, the government of the new Indian state of the Punjab sent a mission to Europe to choose a team of leading architects and urban planners which could design a state capital. As a result of their efforts, the Swiss-born French architect Charles-Edouard Jeanneret, known as Le Corbusier, was commissioned to draw up a master plan and design the official buildings.

The site of the city was a vast plateau

The university auditorium, Chandigarh (India).

extending over 500 hectares (half the area of central Paris). It was bounded to the north by the foothills of the Himalayas, and to the east and south by the beds of two rivers, the Sukhna and the Patiali, which swelled to a torrent during the monsoon. At the centre of the site, a band of greenery ran from north to south. The land sloped gently downwards towards the south to large clusters of mango trees which formed natural landmarks and to the village of Chandi, from which the city would take its name.

The new city was destined to be the seat of the government and parliament of the Punjab and also a university centre. In the first phase of construction, official buildings, dwellings and facilities for 150,000 inhabitants (including 10,000 civil servants and their families) would be built. In addition to the services sector, an industrial development area with road and rail facilities would be created. During the second phase the population was to rise to 500,000.

The apostle of mechanization

Le Corbusier, who was known as the "apostle of mechanization", applied his ideas about modern city planning to a historic region which had been inhabited for thousands of years and where people still travelled by donkey or camel, or in carts drawn by horses or oxen. He proposed an urban highway network linked at certain points to a secondary network for motor traffic which would move more slowly. The Punjabi authorities accepted this approach although it called for substantial investment at a time when motor traffic was still virtually non-existent. The capital of a developing state needed an infrastructure which could underpin the country's spectacular development. Chandigarh would be able to face this challenge since its planned road network would keep traffic flowing smoothly.

To define the character of Chandigarh, Le Corbusier grouped together all the government buildings in one vast area, the Capitol, at the highest point of the city, with a marvellous view towards the mountains. Between 1951 and 1963, he designed and built most of these buildings—the High Court, the Secretariat, and the Legislative Assembly—which are today considered the keystone of his work as an architect. At the foot of the Capitol, the city slopes gently between the two rivers, its plan defined by a simple, logical network of arterial roads which meet at right angles, like the streets and avenues of New York.

But similarities with New York end there. Instead of New York's dense fabric of residential blocks Chandigarh has neighbourhood units where the housing is no more than five storeys high, and where there are as many green spaces as residential zones. There is also a much more extensive network of roads, divided into categories with different capacities and speed limits. None of the main arterial roads is directly linked to housing.

The neighbourhood units, each of which has a specific purpose according to its location, are mainly residential, with population densities

varying from 80 to 280 inhabitants per hectare. Villages within the city, they have their own shopping centres, schools and health centres. They are served by an east-west transversal road, a shopping street where the speed of traffic is limited. This road provides a sense of continuity and community between the different neighbourhoods. It takes no more than a quarter of an hour to walk through each one.

In addition to the Master Plan, Le Corbusier drew up a tree planting scheme designed to create micro-climates in particularly exposed areas, to prevent drivers from being dazzled by headlights on the main roads, and to provide shady areas for car parks, cycle tracks and pedestrian paths as well as wind-protection screens.

Le Corbusier and his team did not want to impose Western ethics and aesthetics on the Indian people but, through buildings rationally designed to provide optimal conditions of comfort, to respond to the aspirations of a people living through a period of rapid change.

Chandigarh today

What is Chandigarh like today, a quarter of a century after Le Corbusier's death?

The city has developed slowly and not entirely smoothly. It was clear right from the start that demand for water would far exceed available reserves, especially during the dry season, and as a result a four-kilometre-long dam was built across the Sukhna in record time to store the monsoon rains and to provide irrigation for market gardens within the city limits. This reservoir, now known as Lake Sukhna, has also become the centre of a park and a leisure complex.

The construction of the residential zones, offices and business premises as part of the first phase was slow and sporadic. Isolated groups of buildings stood out in a kind of no-man's-land without community facilities. Mobile market stalls proliferated at the junctions of the access roads until they were gradually pushed out by the construction of shopping centres, as Le Corbusier had planned.

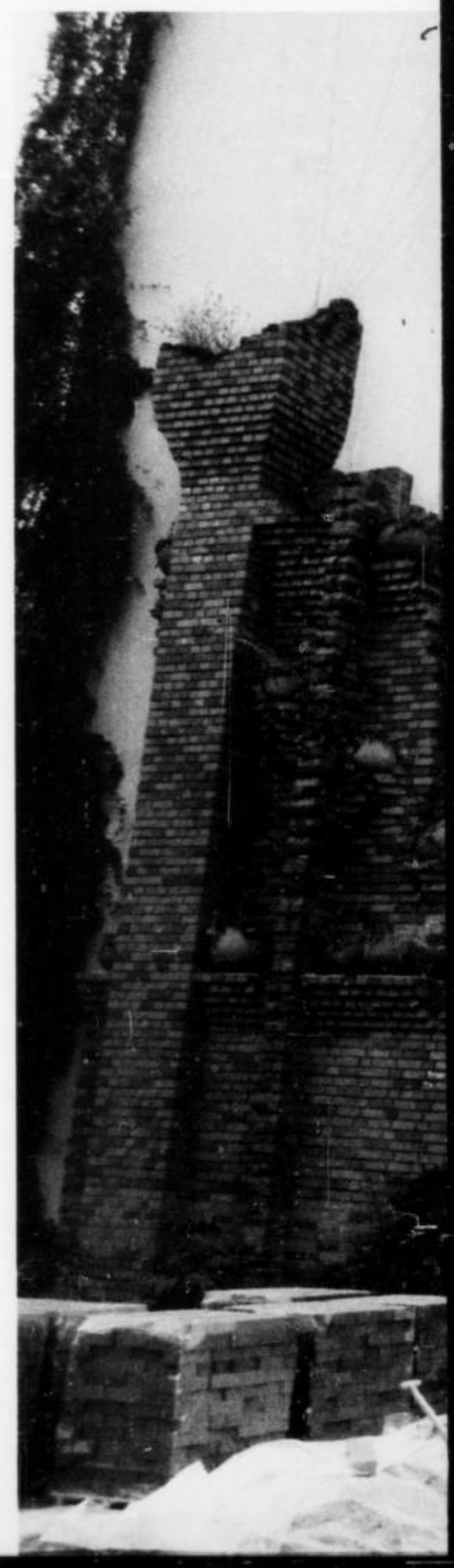
Chandigarh today is changing rapidly. As a result of the development on its boundaries of the capital of the new state of Hariana, created by the division of the Punjab, the population of the conurbation as a whole is now a million.

The city has also become a major university centre, which takes substantial numbers of students from the region and from neighbouring countries. In 1976 it hosted a Unesco symposium on urban problems and the education of town planners. It is regarded by its inhabitants as an ordered city, unlike the eastern suburb which is developing chaotically with large numbers of poor squatters in insanitary areas exposed to polluting industries and lacking community facilities.

Thirty years after the foundation of Chandigarh, motor traffic still flows easily through the city. The number of vehicles is increasing very slowly, and the main form of transport is the bicycle. Unfortunately, the proliferation of motor scooters, motor cycles and above all of motorized rickshaws, is gradually transforming the almost rural calm of Chandigarh into a deafening roar.

The slowest district to come to life was the civic centre. Planned to house official bodies and cultural and commercial institutions, it long remained a building site. With the opening of shops and the big cinemas loved by young Indians, the heartbeat of the city became more lively.

The second phase is under way, and the development of the Capitol according to Le Corbusier's designs has continued with the construction of a "Pit of Consideration", a "Tower of Shadows", and traditional "tanks" in front of the Legislative Assembly, and the erection of the "Open Hand" monument, a symbol dear to Le Corbusier which was inaugurated in 1987 on the centenary of his birth. ■



Sketch of Chandigarh by Le Corbusier.

BERLIN

A testing ground for urbanism

by Hardt-Waltherr Hämer

IF you want to get to know Berlin you are bound to visit the Kreuzberg district at some time or other. There you will find an audacious mix of architectural styles in a crowded city environment. Modern buildings stand next to run-down tenements. There are workshops in upper storeys and sheds in the courtyards of recently restored apartment blocks. In the streets, the squares and the few open spaces, native Kreuzbergers rub shoulders with punks, Turks wearing headscarves as if in Anatolia, and urbane figures sporting the typical Berlin look. There are many dogs and even more youngsters. Kreuzberg must house more children than any other neighbourhood in Europe. You may also, however, notice a burned-out supermarket on a street corner; for in Kreuzberg, they will tell you, something goes up in flames every May Day—if not a supermarket, then at least a car or two. You will hear of a grim tradition of disturbances and street fighting.

Sculpture by the "Tonteufel" group of artists in Berlin's Admiralstrasse, 1985.

A building erected in 1984 near the Landwehr Canal, Berlin.

For the story of Kreuzberg is first and foremost that of the conflicts and controversies that punctuate social change in our society. It is a district where extremes clash head-on and urban chaos reaches its peak. In a city that is constantly trying to learn the secrets of peaceful coexistence, Kreuzberg has for generations been a testing ground for urban development.

Lenné's green city

The district's history began with a plan for an ideal garden city drawn up by an architect named Peter Joseph Lenné in 1841, shortly after the revolution brought by the coming of the railway. In Lenné's project, the district was to be called Südliche Luisenstadt.

After 1850, however, Berlin spread out beyond the ring of boulevards that surrounded the old city to accommodate an influx of newcomers from the provinces. The first expansion was so rapid that before long dwellings were being built even in gardens in the courtyards of apartment blocks. This was when Berlin's *Mietskasernen* (literally, barrack dwellings) were born. Tenements with tiny courtyards, they were popular with property speculators at a time when housing was in short supply.

The masses flocking to the city crowded into ever-smaller dwellings that often served in addition as cottage-industry workplaces. Then manufacturing industry moved in, and factories went up next door to the tenements. The district that in Lenné's mind had been crisscrossed with broad avenues, canals, promenades and gardens was now overbuilt and overpopulated. It had become a working-class slum.

Eventually conditions became bad enough to stir up an outcry, directed not just against the city authorities but also against the whole development process that had created the slum. Property speculation fell into ill repute and the concept of the garden city was revived. The modern homes of the 1920s were a reaction to the social misery of the old, stone Berlin.

The aftermath of war

Almost a quarter of the city was destroyed during the Second World War. Only ruins remained of the streets in the neighbourhood of the ministry buildings and the Ritterstrasse, where the arms factories had been located. But the working-class district, including Kreuzberg, between the River Spree and the Landwehr Canal escaped relatively unscathed.

Some years later, in 1961, the Cold War resulted in the construction of the Berlin wall, which split the city from north to south and cut Kreuzberg off from the old city centre and traditional leisure areas such as Treptow park, which were situated in the eastern sector of the city. Once a central district, Kreuzberg became peripheral, a dead end.

Yet the damage caused by the war and the Berlin wall pales into insignificance in comparison with that caused by redevelopment programmes between the 1950s and the 1970s. An urban planning competition held in 1957, billed as *Berlin, Capital City,* launched the idea of a massive motorway network. A four-lane ring road was to serve the business centre, and expressways with stacked interchanges replacing junctions would separate residential islands from commercial areas.

The problem was that the existing urban fabric stood in the way of this planner's dream. For more than two decades entire streets were expropriated and torn down. The buildings put up in the 1960s and 1970s still bear witness to the damage done. For those who had to suffer its effects, urban renewal became synonymous with destruction.

Kreuzberg's revolt

Kreuzberg's inhabitants were transferred—whole neighbourhoods at a time—into new apartment blocks. But the apartments they vacated were filled, even before they could be demolished, by immigrant workers and by tenants driven from

HARDT-WALTHERR HÄMER, German architect, is vice-president of the Berlin Academy of Sciences. From 1979 to 1985, he was head of urban renewal in the follow-up to the *Internationale Bauausstellung*, an international architectural exhibition held in Berlin in 1978. He has published a number of books, notably on theatre construction and urban renewal.

Above, a Kreuzberg façade decorated with ceramic figures by the Turkish artist Hanefi Yeter.
Below, mural on an Admiralstrasse apartment block, painted in 1985-1986.

their previous homes by development programmes elsewhere in the city. The evictions left thousands of apartments empty at a time when some 80,000 people were urgently looking for accommodation. Some of these people ended up by occupying and refurbishing the empty buildings, as the property companies that had bought them up were no longer maintaining them.

The squatter movement grew too fast for the police to hold it in check. By May 1981 there were 168 illegally-occupied buildings in Berlin, 86 of them in Kreuzberg. The new residents lived with the threat of eviction and demolition hanging permanently over their heads. But they also had some popular backing. Demonstrations in their support drew tens of thousands of people. The politicians were thus confronted by the consequences of their own planning decisions.

In combination with increasing construction costs and a reduction in housing subsidies, popular resistance eventually paralysed the renewal programme around 1978. Faced with growing unrest and the indignation both of those who upheld property rights and those who attacked them, the municipal authorities decided to try to get the city's development back on course.

An international architectural exhibition held in 1978, the *Internationale Bauausstellung* (IBA), provided an opportunity for returning the city centre to residential use. A company was founded to rebuild on sites left derelict since the war. It also led to the renovation of the district between the Spree, the Landwehr Canal and the old Luisenstadt Canal, in other words the very district that had sparked off the opposition to the original redevelopment programme.

A fresh mistake

The city council outlined a plan of action: 1,600 new homes were to be built and 1,500 existing ones restored at the heart of the Kreuzberg redevelopment zone, on both sides of the Mariannestrasse. More than 12,000 people and several hundred businesses would be directly affected, as their homes and workplaces would be expropriated and in 80 per cent of cases demolished.

During the winter of 1979, Kreuzberg

residents complained that draughts and snow were coming in through gaps in their roofs, doors and windows. The buildings needed urgent repairs but the authorities were not in a position to carry them out and the property companies wanted to put off work until the following year, to the anger of the residents. At a public meeting, the latter decided to give up their weekends to restore four houses in Manteuffelstrasse that had already been partially cleared of their occupants and were awaiting demolition. The houses, which are still standing today, are now the property of the *Instandebesetzung*—the squatter-renovators, organized into co-operatives.

For Kreuzberg residents, the experience of working together in the cold and damp changed many things. They were no longer prepared to let themselves be evicted, and wanted to be involved in all decision-making that affected their neighbourhood. Their representatives drew up a list of demands and complaints to be presented at the IBA.

At first the authorities were hostile to their pleas for participation. It was feared that the redevelopment programme would become bogged down in interminable discussions, or that unreasonable demands would make its cost excessive.

To soften their opposition, the residents drew up, with the help of experts from Rotterdam, Hamburg and Vienna, a list of guidelines for "reasoned renewal". It was the action of the squatter-renovators, though, that brought things to a head. Although some Berliners considered them justified in taking the law into their own hands, most of them considered their action to be intolerable. Together with a series of housing scandals, the unresolved problem of urban renewal led to the fall of the government a year before elections were due. Now at last it became imperative to find realistic solutions.

It was not until March 1983, however, that the residents' guidelines finally received official approval. They specified that plans for redevelopment should be drawn up in consultation with the people directly affected by them, and that their views should be taken into account when any decision was made. The inhabitants of a building were to have a right to vote before any work was done on it. Disagreements could be taken to a redevelopment commission or a neighbourhood committee.

Although this programme has not yet been formally accepted by the authorities, it has proved its worth on many occasions. In any case, critics have been silenced by the results achieved. Far from slowing things down, the assent of those concerned, for instance in matters affecting home maintenance or temporary removal while repairs are carried out, has actually made for faster progress. As for the cost of the operation, the adaptation of renewal measures to the wishes and pockets of the residents has saved money, both by reducing construction costs and avoiding rent increases—and consequently rent allowances. It has been estimated that, partly as a result of the consensus approach, the redevelopment has cost about 58 per cent less in public subsidies than the 1978 programme would have done.

The 1978 plan has in fact been profoundly altered. Only 360 new dwellings have been built in place of the 1,600 originally specified, but 7,000, not 1,500, have been restored. Ten schools are to be expanded and improved, and 24 creches will be provided to receive 1,640 children. The courtyards of 320 buildings have been turned into small parks or—with the approval of the residents—into private gardens. Streets and squares have been landscaped in over 170 places, and many facilities have been provided for culture, sport and young people.

There is still squalor in Kreuzberg, but working with the victims of that squalor has provided 7,360 decent rented properties and has improved schools, creches and the general environment. The demolition has been stopped, and living conditions have become more bearable. Everyone involved now knows that it is possible to save a city—even when it has been largely destroyed. ■

A children's farm beside the Berlin wall, Kreuzberg district.

The squatter-builders of Lima

by Anna Wagner de Reyna

SQUATTER settlements—the so-called "spontaneous" districts—began to proliferate in Lima shortly after the Second World War. They were the result of an influx of population brought about by internal migrations, a shortage of dwellings for the poorer classes, and the lack of any coherent social housing policy.

What distinguishes these settlements from other residential districts of the Peruvian capital

Aerial view of Villa María del Triunfo, a working-class suburb south of Lima (Peru).

is the fact that they were built by their own residents, without any external financial support and in contravention of existing property laws and urban housing standards. The land on which they are constructed was usually acquired illegally, sometimes simply by occupation, and the normal sequence of urban planning was reversed: people moved onto the site before the buildings went up, and only later were the dwellings provided with services and legally acquired by their occupants.

It is a very special kind of urban development. Whole neighbourhoods, built by the poor themselves, spring up suddenly, sometimes within hours, and then remain unfinished for years on end. They are precariously built and inadequately equipped—characteristics that won the name "spontaneous" for this new form of urbanization.

According to the dictionary definition, the term "spontaneous" implies something impulsive and uncalculated, instinctive and unconstrained. However, none of these epithets applies to the squatter-built settlements of Lima, which have a rigour and a coherence that sit uneasily with any suggestion of unconscious or unconsidered activity. Nor are the districts spontaneous in the sense of following the dictates of nature rather than culture, for they fit into a historical and cultural context. They are, in fact, a response by the needy to the failings of public and private housing policy.

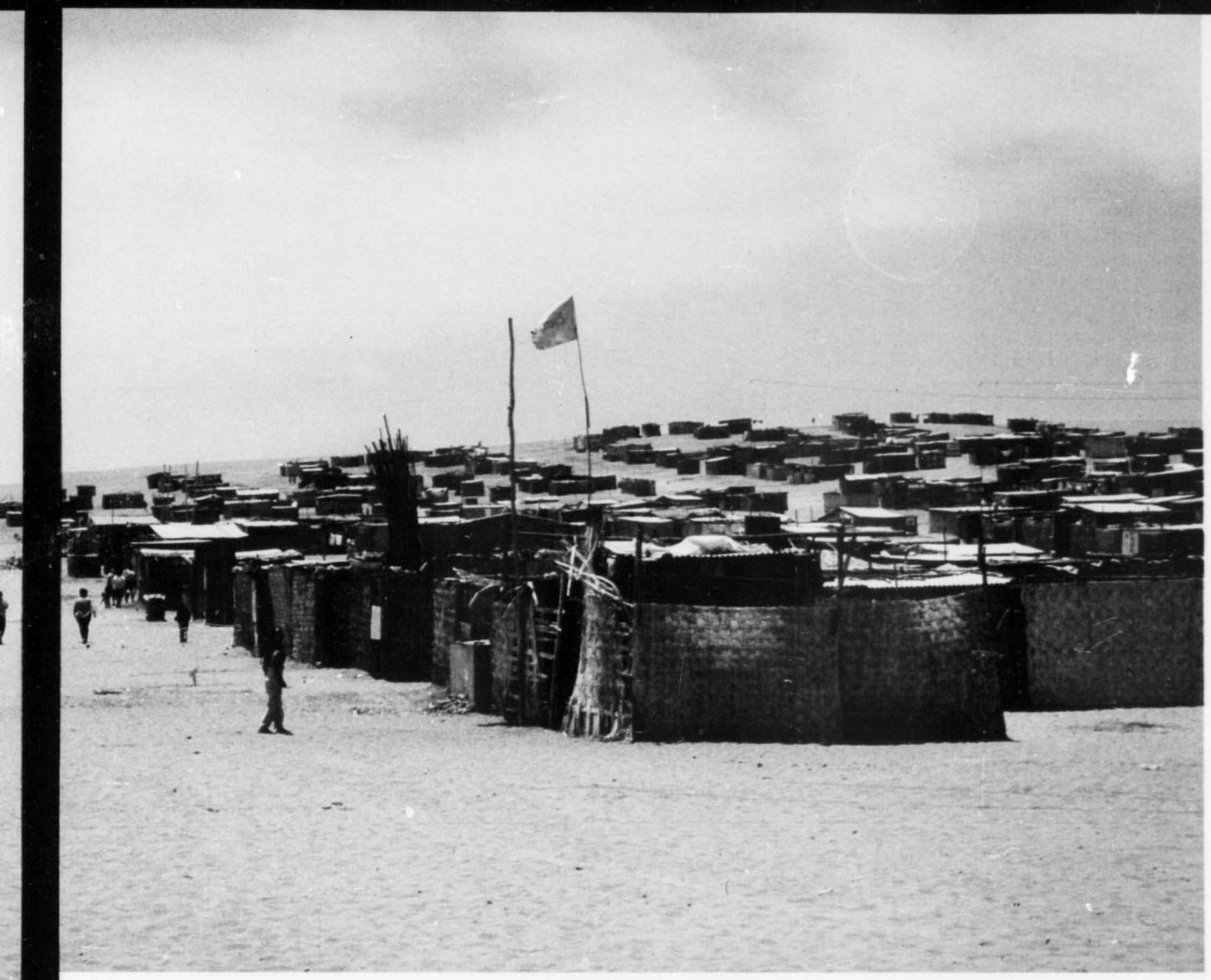
The roots of popular urbanism

Even a hasty glance reveals that the districts follow a methodical plan, usually a grid pattern. Roads meet at right angles, and are often grouped around a central square known as the *plaza de armas*—the parade-ground.

Left, most new structures in Villa El Salvador, on the outskirts of Lima, are built by community volunteers.

On the level ground on the city's outskirts, this chessboard model is systematically applied. Wide, straight roads delineate squares and rectangles. A similar pattern is repeated on the hillsides wherever the lie of the land permits. The square at the centre of the grid is the site of the principal public buildings such as the church, the school, and the town hall. Land set aside at the start of the project allows room for the settlement to grow and provides some green spaces, although in time these often disappear to make more room for housing.

The urban grid pattern with a central square has great symbolic significance in South America, since it was used by the Spaniards in the sixteenth century as part of their efforts to organize and pacify their newly-conquered territories. With the exception of a few ports and mining centres, the ground plans of almost all the towns and cities founded by the Spaniards were as regular as chessboards. There was nothing spontaneous about this form of urbanism. It was the result of careful calculation that found its clearest expression in 1681, during the reign of the Spanish King Charles II, in a widely-circulated compendium of laws relating to the Indies,[1] in which the chessboard model was prescribed as the only conceivable form of urban layout. Earlier directives, including one promulgated by Philip II



Newcomers to Villa El Salvador often use straw as a material when building their first home.

in 1573,[2] had already recommended this arrangement as a model both for Spanish and Indian communities.

At that time the grid pattern was a response to important strategic imperatives. With its central *plaza de armas*, it seemed in the first place almost a replica of the military camps to which the Spaniards were accustomed to withdraw when trouble threatened. Besides having purely military uses, however, the grid was part of an attempt to instil in the overseas territories a rigorous social organization of which the underlying assumptions were order, unity and cohesion. In spite of their vast numerical inferiority, the Spaniards would succeed through this urban model in imposing on the indigenous peoples the image of a people strong in its discipline, organization and efficiency.

Today the same simple ideas have re-emerged, inspiring a similar solution to the problems of development. The motives are, after all, analogous: the need to bring order to a piece of land.

Bending the rules

The communities of squatter-builders contravene the law, not only because the land they build on has not been legally acquired but also because they flout the planning regulations by which a district has to be equipped with basic services before it can be settled. The would-be residents have to organize themselves to circumvent the rules.

A typical group of squatter-builders consists of a nucleus of families which either come from the same part of Lima or from the same part of the country. The first problem is to choose a site. To minimize the risks, they usually choose vacant land in public ownership, since the state is more likely to tolerate an occupation than private landowners, who generally fight vigorously to defend their property. The squatters normally need the backing of a well-placed politician or civil servant, who can suggest possible sites to them. The families then choose leaders to take charge of the operation, for occupying the land involves co-ordinated collective action. Moving in is not an initiative for individuals but a communal task demanding concerted action by all the members of the group.

The next stage is to draw up a plan outlining residential zones and public spaces, shared amenities and land reserved for future extensions. The families are given advance notice of the timing of the occupation, and each has specific jobs assigned to it. An advance guard, most of which are men, moves in to take possession of the land, with the women and children providing back-up.

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The group must then stay put, both to prevent other families coveting the same site from moving in and to resist any reprisals by the forces of order.

The blueprint for the district is immediately traced out on the ground. Individual lots are assigned, and temporary shelters made out of rush matting are erected on each one. The whole operation must be carried out quickly, simply and in good order, for an immediate, visible occupation of the district reduces the risks of subsequent expulsion.

Life soon begins to get organized in the precarious encampments. Those in charge arrange for trucks to deliver water, and do their best to see that public transport starts to serve the new district. The residents set about constructing housing units and public amenities. At best it takes ten to fifteen years before the infrastructure of a new residential district is completed. The risk of eviction slows the process even more. Districts where people lack security of tenure develop two or three times more slowly than those where they enjoy such tenure. Consequently, the organizers go to great lengths to win recognition of their title to the annexed land.

Below, a Bangladeshi family works together to make a home.
Bottom, at Popotlán (Republic of El Salvador) low-income families are building their own homes with the help of small loans for materials and on land provided by FUNDASAL, the Salvadorian Development and Low-Cost Housing Foundation.

Usually they form alliances with political parties that promise them legal right to the land in return for votes.

The social organization that enabled the land to be occupied and divided up and allowed houses to be built and services to be provided, evolves to cope with the new problems facing the community. The organizers' job is no longer just to defend land illegally acquired; now they must also handle the day-to-day administration of the district. Their goal is to raise the living standards of the residents, for example by sorting out problems caused by the division of the land, as well as to maintain order and see that the rules that guarantee the solidarity and cohesion of the community are respected. Transgressors are severely punished. Families that refuse to participate in a collective endeavour like building a school are not allowed to send their children to that school. Local tribunals deal with thefts, muggings and other crimes.

A new urban model?

Right from the start, the state passively encouraged the growth of the squatter settlements, firstly by failing to provide any effective alternative social housing policy and subsequently by tolerating and eventually legalizing them.

The first legal attempt to deal with them dates from 1961, fifteen years after the earliest communities had sprung up. That law was inspired more by political and electoral considerations than by any considered policy of resolving the housing problems of the poor. Its authors sought primarily either to win votes or to bring some order to the question of land ownership in the capital. In 1984, however, the city authorities made an attempt to adopt the squatters' methods in developing its own social housing programme. The mayor decided to make land available to a group of families that was already organized to take advantage of it. Realizing the impossibility of handing over the land through accepted legal channels, he simply allowed them to go ahead and occupy it.

So perhaps the word "spontaneous" is no longer really appropriate for these settlements. Drawing on the traditions of the Spanish conquest and with a social organization comparable to that of conventional society, Lima's squatter communities have proved efficient enough to challenge traditional assumptions of urban development, and finally have forced the powers-that-be to accept their methods as a viable solution to the problems of popular housing. ■

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1. *Recopilación de las leyes de los reinos de las Indias* ("Compendium of Laws of the Kingdoms of the Indies"), published by Cultura Hispanica, 1973.
2. *Ordonanzas de descubrimiento, nueva población y pacificación de las Indias* ("Ordinances Concerning the Discovery, Colonization and Pacification of the Indies"), Archives of the Indies, Seville, Spain. *Editor*

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Spanish-Muslim art
An exhibition of some 150 important works of art produced during the centuries of Arab presence in Spain will be held at the Alhambra palace in Granada on the occasion of the Seville Universal Exhibition in 1992. Organized by the Andalusian authorities and the Metropolitan Museum of New York, the exhibition will feature works loaned by major world museums such as the Louvre in Paris and the Hermitage in Leningrad.

■ ■ ■

Power from plants
"The energy sources available today, such as oil, gas and coal, will not last forever. Oil will be exhausted in 50 years. This is why we must direct research towards the discovery of renewable sources," said Nobel Laureate Sir George Porter at a recent meeting at the Ramon Areces Foundation in Madrid. Sir George, president of The Royal Society and joint winner of the 1967 Nobel Prize for Chemistry, believes that plants will provide one of the main energy sources of the future, particularly through the process of photosynthesis.

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The year of Rembrandt
In 1991, the Rijksmuseum, Amsterdam, the Gemäldegalerie and the Kupferstichkabinett, Berlin, and the National Gallery, London, are jointly organizing a major exhibition of the works of the Dutch painter Rembrandt (1606-1669) and his most gifted pupils. Canvases have been loaned from private and public collections in the United States, France, the Soviet Union, Austria and Australia. 700,000 tickets will be on sale from 1 August 1991, following the advance-sales system which was successfully tested during last year's Van Gogh exhibition held in Amsterdam.

■ ■ ■

Children's rights on film
An international group of film-makers (Jerry Lewis, Jean-Luc Godard, Euzhan Palcy, Rolan Bykov, Lino Brocka, and Ciro Durán) have written and directed six short features which together make up a 60-minute programme entitled *How are the Kids?*. The English version of the films (with subtitles where appropriate), each of which illustrates an aspect of the children's rights proclaimed by the United Nations, will be shown on BBC television later this year.

■ ■ ■

Saving the Black Sea
The Black Sea is on the verge of catastrophe, says Prof. Georgi Dechev, head of the Bulgarian Institute of Ecology in Sofia. He warns that the situation is so serious that all living organisms in the Sea are threatened with extinction, and that toxic chemicals in the water could begin to pollute the atmosphere, spelling ecological disaster for over 150 million people living on the coast and in the Danube river basin. With the support of the United Nations Development Programme, the World Health Organization and the United Nations Environment Programme, the countries on the Black Sea coast are drawing up a convention to assess the extent of the environmental problems and how to deal with them.

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'Cosmic popcorn'
In a recent issue of the British scientific weekly *Nature*, the British mathematician and astronomer Sir Fred Hoyle and other astrophysicists discuss evidence to show that the generally accepted view of the Big Bang model for the origin of the universe is unsatisfactory. They propose an alternative model which suggests a series of small creation events in which new matter is ejected, a process which has been described as a kind of "cosmic popcorn". This hypothesis, consistent with Prof. Hoyle's long held steady-state theory (that the universe is expanding and that matter is being constantly created), may help to explain phenomena such as microwave background radiation and quasars.

■ ■ ■

5,000 years of European history
A history of Europe has recently been published simultaneously in 11 European countries and in 8 languages. Written by eminent French scholar Jean-Baptiste Duroselle with the assistance of historical advisers from Germany, Italy, Spain and the United Kingdom, the work aims to contribute to a better understanding of 5,000 years of European history seen in overall European as opposed to national perspective. The English translation by British historian Richard Mayne, entitled *Europe: A History of its Peoples*, is published by Viking Penguin Books, London and New York.

■ ■ ■

Bees against bacteria
Scientists from the National Heart and Lung Institute, London, have discovered that propolis, a resinous substance collected by bees from the buds of trees for use in the construction of their hives, appears to contain antibiotics capable of killing certain bacteria and which may form a future basis for medicines.

■ ■ ■

A second Noah's Ark
An unprecedented ecological experiment known as Biosphere 2 was launched in December 1990 in the Arizona desert, USA. The Biosphere consists of a series of airtight greenhouse-like structures in glass and steel covering over a hectare and aiming to be a self-contained microcosm of the world's ecosystems, including selected animals and plants. For the next two years it will be home for 4 men and 4 women, whose only contact with the outside world will be electronic. The project has been developed by a private company to test the feasibility of space colonies.

■ ■ ■

Tactile art for the blind
An exhibition entitled "Tactile Graphic Art" is being held at Unesco Headquarters in Paris from 4 to 15 January 1991. It has been organized by the Belgian Permanent Delegation to Unesco as part of the United Nations World Decade for Cultural Development (1988-1997). Some hundred works by over 70 Belgian artists are being shown, each accompanied by a relief version for blind or partially sighted visitors. To produce the "tactile" pictures, a special paper is used which swells when heated, particularly in the inked areas.

■ ■ ■

Literacy prize
One of the 5 international literacy prizes awarded by Unesco on 8 September 1990 in Geneva, the Noma Prize offered by Japanese publisher Shoichi Noma went to the Institute of the Brothers of the Christian Schools. This teaching organization of religious and lay members has built up a network of 1,200 educational institutions in 81 countries, and concentrates on literacy training and education for deprived and marginalized people in both Third World and industrialized countries.

■ ■ ■

Einstein's dream
The biggest particle accelerator in the world, the large electron-positron collider (LEP) which became operational in 1989 at the Geneva-based European Laboratory for Particle Physics (CERN), is the centre of a research programme on subnuclear particles and forces of matter. Before the end of the century, the team of scientists involved in one of the CERN experiments, DELPHI ("Detector for Lepton Photon Hadron Identification"), hopes to find a new class of matter called supersymmetric particles. The existence of such particles is predicted in the "grand unified theories" now being explored by physicists and which if verified would fulfil Einstein's dream of discovering the common laws governing the behaviour of everything in the universe.

The Jesuit missions to the Guarani

by Caroline Haardt

In the seventeenth century the Jesuits organized a remarkable experiment in community living in the homeland of the Guarani Indians, on the borders of what are today Argentina, Brazil and Paraguay. The experiment, which was compared at the time to Thomas More's *Utopia,* to the design for a utopian commonwealth set forth by the Italian philosopher Tommaso Campanella in his book *The City of the Sun,* and even to Plato's *Republic,* lasted for over a century. It provoked admiration in some quarters and indignation in others, but no one who knew anything about the matter was indifferent to it.

Attempts had been made to convert the Guarani to Christianity during the sixteenth century, when the area was being colonized by the Spaniards and the Portuguese. The Society of Jesus and other religious orders had sent itinerant missionaries into the Indian villages, where they preached the Gospel before hastily retreating back to the relative comfort of their colleges. These attempts to convert the Indians were a failure. Collective baptisms and other sacramental rites made no lasting change in their religious beliefs. Idolatry continued to be practised. The missions eventually led to disguised forms of slavery and encouraged abuses by European colonists and rich creoles who exploited the captive labour force.

The exploitation of the Indians, combined with the weakness of the religious orders, led to a crisis which Francisco de Toledo, the Spanish Viceroy of Peru, and the Jesuit fathers determined to resolve.

In 1602, the Jesuits began to replace the itinerant missions by founding villages in which the Indians could be concentrated and taught Christian doctrine in a stable environment. These villages became known as *reducciones*—reductions—since in them *ad ecclesiam et vitam civilem esse reducti* ("people were to be led to the church and to civic life"). The first of them were established by the Jesuits of the province of Paraguay.

It was no easy task to persuade the Indians, who were strongly attached to their homelands, to settle in the reductions. The Jesuits realized that they would have to create an environment in which Guarani tribes from different places could feel a sense of ethnic and cultural unity. They chose sites which could be easily defended, with forests, streams and land that could be farmed.

To the Indians, the missions offered a number of attractions—dwellings, the opportunity to practise trades and crafts, plenty of food (above all the beef they loved) and the beverage known as "Jesuit tea", which was made from the maté plant and which also served as currency. Dances, theatre, music, processions and military manoeuvres were other blandishments that contributed to the success of the Jesuit missions.

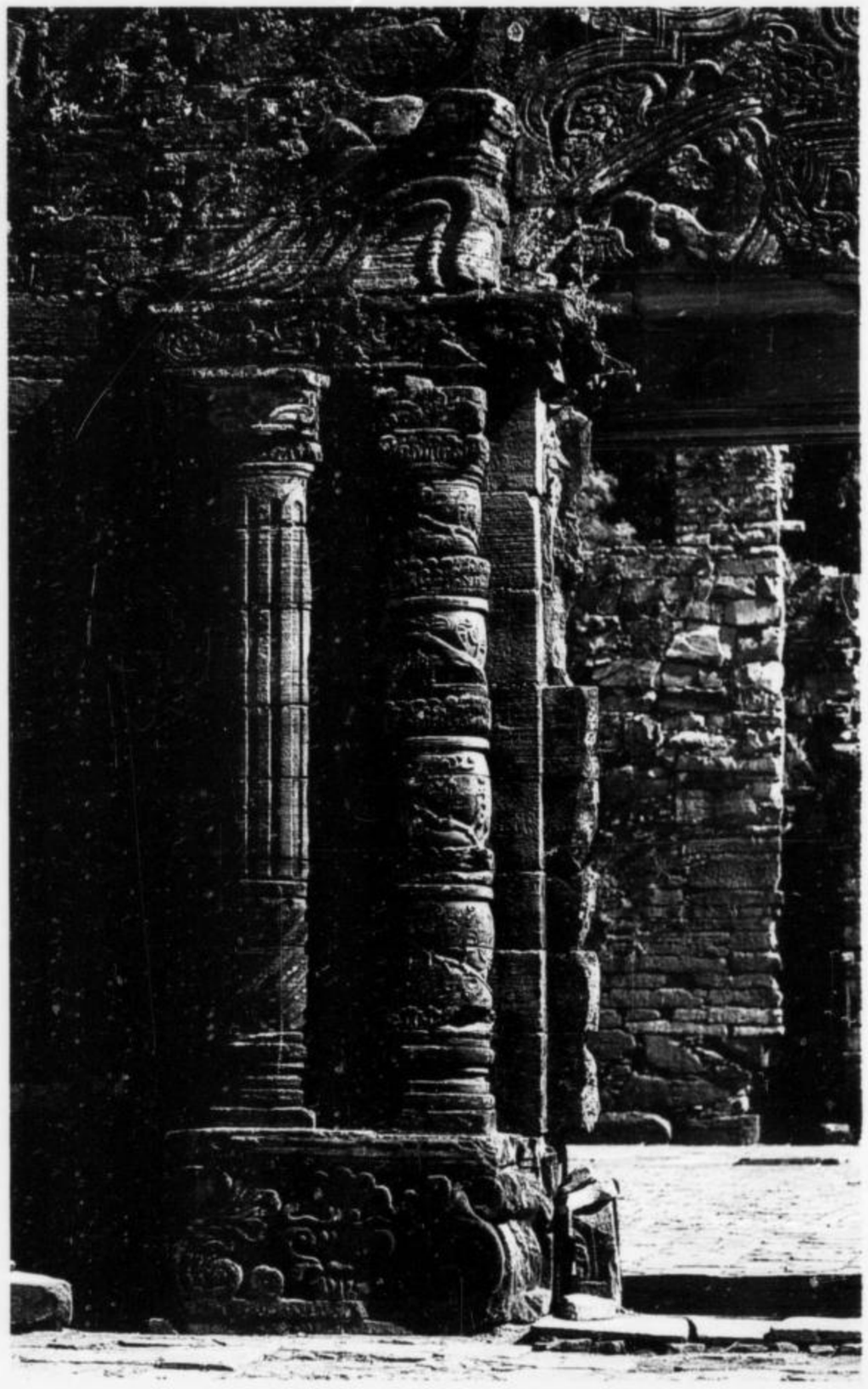
Each reduction was self-governing, under the spiritual supervision of a priest. The Jesuit fathers maintained the powers of the traditional chiefs or caciques, and each village also had a *calbido* or council of notables. Agricultural produce and objects produced by craftsmen belonged to the community. Each family received the necessities of life. Any surplus went to widows, to the sick, to the church, or as taxes to the Spanish Crown.

Each reduction specialized in a particular activity, which was determined by the resources available to it. Some practised animal husbandry, others cultivated maté or cotton, or devoted themselves to carpentry or working in precious metals.

Right from the start, the Guarani missions provoked envy. They were violently attacked by *bandeirantes,* adventurers and gold prospectors from the São Paulo region of Brazil. The most severe attacks took place between 1628 and 1630, when groups of Indians were captured and taken into slavery. Eventually the incursions became so numerous that the Jesuits moved the reductions and established them between the Uruguay and Paraná rivers (in what is now Paraguay).

Furious to see the Indians slip out of their grasp, the Spanish colonists, and above all the *encomenderos** of Asunción, were also extremely hostile to the missionary villages. In the mid-seventeenth century, the Jesuits asked the King of Spain for permission to arm the reductions so that they could defend themselves against attack. Thus armed, they established thirty missions definitively:

The Jesuit missions of San Ignacio Mini, Argentina (below); Trinidad, Paraguay (opposite page above); and São Miguel, Brazil (opposite page below).



CAROLINE HAARDT,
French journalist, was a member of Unesco's Division of Cultural Heritage from 1983 to 1987. She is currently preparing an exhibition as part of the Unesco Silk Roads project on the *Croisière Jaune,* a motor rally from Beirut to Tibet held in 1931-1932.

WORK IN PROGRESS

In **Argentina,** to save the missions of *Martires, San Javier, Corpus, San José* and *Candelaria,* encroaching vegetation must be cleared, stonework must be cleaned, and an infrastructure must be established to protect the ruins and prevent looting.

The other missions in Argentina are in a better condition, but restoration and consolidation work is still necessary. The most extensive work has been done at *San Ignacio Mini,* which has been a major tourist attraction for the past 25 years, and is particularly representative of the architecture of the missions (ornately decorated church walls and portals, high-walled Indian houses, a college with ceramic flooring). Between 1978 and 1980, museums were created in most of the missionary villages.

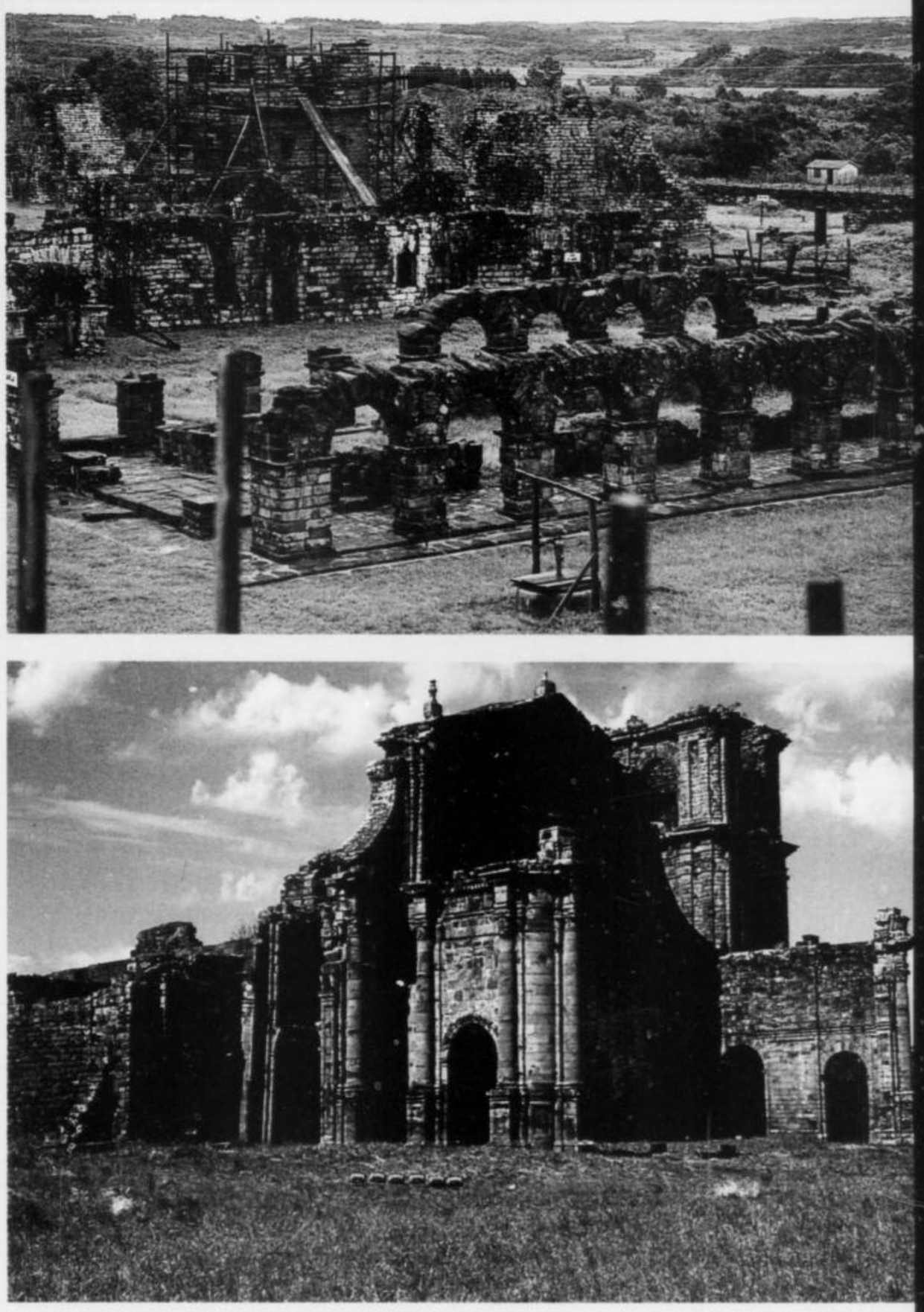
In **Brazil** excavation and restoration work is under way at the three main sites: *São Miguel, São Nicolau* and *São Lourenço.* The Brazilian government is trying to persuade the São Lourenço authorities to close the road that runs through the mission and to clear the vegetation that infests it. Excavations have led to important discoveries. At São Nicolau a remarkable wooden capital has been unearthed.

Since the creation of a Historic, Artistic and National Heritage Service, new impetus has been given to operations at São Miguel, where there is an unusual church notable for its baroque façade and porch, and its dressed stone structure supported by masonry pillars. Only its timber roof is typical of the traditional architecture of the missions. The collapse of the porch led to subsidence which has affected the façade and the tower. The latter has been dismantled and rebuilt. Urgent measures are necessary to prevent the rest of the church from collapsing.

In **Paraguay,** work began in 1976. The college of the *San Ignacio Guazú* mission, which is still inhabited by Jesuit fathers, houses a museum of sacred art. The magnificent collections of wood carvings and engravings at *San Ignacio* and *Santa Maria de Fe* have been meticulously restored. The chapel at *Santa Rosa,* with its murals, carved doors and panels, is unique in Guarani missionary art. The murals are currently being repaired.

At *San Cosme y San Damián,* which includes the only group of buildings among the mission villages which has been continuously inhabited since the seventeenth century, the original wooden structure of the chapel has been restored.

At *Trinidad,* major efforts have been made to clean the stonework of the presbytery, repair the roof of the sacristy and consolidate the structure of the college and the church. With its three naves, tower, cupola covered with varnished tiles, and frieze of angelic musicians which adorns the crossing of the transept and the choir, the Trinidad church is doubtless the architectural masterwork of the Jesuit missions. ■



fifteen in Argentina, seven in Brazil, and eight in what is now Paraguay. They flourished, and some of them comprised more than 6,000 Indians.

Architecturally speaking, the missions differed from the Hispano-American towns whose forms had been defined by the Laws of the Indies. They were designed for community life. At the heart of the village was a large square dominated by the church, which was big enough to accommodate the entire population. The priests' house, the college and other ecclesiastical buildings stood on one side of the square. On the other was the cemetery. The Indians' houses were built in rows around the square.

The experiment came to a sudden end in the second half of the eighteenth century, partly as a result of the new frontiers drawn by colonial treaties between Spain and Portugal, but above all because of the expulsion of the Jesuits from the Spanish and Portuguese dominions. The political and religious autonomy of the missions was seen as a threat to Spanish imperial power, and the Jesuits were replaced by lay administrators and priests belonging to other religious orders. The Indians were dispersed. The reductions were abandoned and fell into ruin. ■

* The *encomienda* was a colonial institution whereby the Indians were divided into groups and enlisted into the service of an *encomendero,* to whom they paid a tax and who was obliged to protect them and convert them to Christianity. *Editor*

SAFEGUARDING SITES IN 3 COUNTRIES

There are 15 missions in Argentina, 7 in Brazil, and 8 in Paraguay. In recognition of the common origin of this cultural heritage, the 3 countries have decided to combine their efforts to restore it. The missions were already partially protected by law in each country, and the first task was to improve and extend this legislation.

• Since 1972, Argentina, Brazil and Paraguay have been engaged, in collaboration with Unesco, in a joint effort to establish a cultural tourist circuit and to restore the architecture of the missions.

• In 1977, the Inter-American Development Bank financed a tourist plan for the Iguaçu Falls region and the Jesuit missions. Thanks to support from private bodies and international organizations such as Unesco and the Organization of American States, restoration and conservation work began in the 3 countries.

• In 1978, in response to a request from the Argentine government, supported by Brazil and Paraguay, a plan of action was drawn up for an international campaign to safeguard the missions.

• In 1983, the Brazilian mission of São Miguel and the Argentine missions of San Ignacio Mini, Santa Ana, Santa Maria la Mayor and Nuestra Señora de Loreto were inscribed on Unesco's World Heritage List.

• On 3 November 1988, the Director-General of Unesco launched an appeal to the international community on behalf of the Jesuit missions to the Guarani. ■

RECENT RECORDS

listening

■ JAZZ

Frank Morgan. *Mood Indigo*.
CD Island 260678. Morgan (alto sax.), George Cables and Ronnie Mathews (piano), Buster Williams (bass), Wynton Marsalis (trumpet), Al Foster (drums).

Frank Morgan is one of the great saxophonists of bebop as well as one of the least-known. In this album of admirable vigour and smoothness, he makes a comeback with Wynton Marsalis. Beautifully served by an outstanding rhythm section, Morgan plays classics such as "Mood Indigo" and "Polka Dots and Moonbeams" as well as original compositions such as "Gratitude" and "Lullaby".

Art Blakey and the Jazz Messengers. *Not Yet.*
CD Soul Note 121 105-2. Blakey (drums), Philip Harper (trumpet), Robin Eubanks (trombone), Javon Jackson (tenor sax.), Peter Washington (bass), Benny Green (piano).

Another excellent disc from the late great Art Blakey and a talented team of young musicians. One highlight is the playing of Benny Green, who provides a superb piano introduction for "I'll Never Be the Same".

Abbey Lincoln. *The World is Falling Down.*
CD Verve 843 476-2.

The first time I heard the "Freedom Now Suite" in the late 1960s was an unforgettable emotional experience. Abbey Lincoln, as spell-binding as ever, is accompanied by some first-rate musicians including Jackie McLean, Clark Terry, Billy Higgins and Ron Carter.

■ FOLK

Chinese Turkestan/Xinjiang/ Uyghur Music.
Box of 2 CDs. Ocora C 559092-93.

The Uyghur live with other Turko-Mongolian populations in Xinjiang in northwestern China, and in the Soviet Union. Turkestan has been a crossroads of civilizations and a meeting point of Orient and Occident. Contemporary Uyghur music, based on *muqam* (modal categories), reflects Arab influence. Among the much-used string instruments are the satar, tanbur, and rawap, variants of which are found in India, Iran, Afghanistan and the Middle East.

Memory of the Peoples/Mémoire des Peuples.
CD Auvidis/Unesco D 8200.

A compilation of folk music from the major world regions. For armchair travellers, a fabulous journey which takes in Corsica, Bielorussia, Kurdistan, Viet Nam, Morocco, and Brazil.

■ POP

Daniel Ponce. *Arawe.*
CD Antilles 90631-2.

One of the best Cuban percussionists in the United States, Ponce arrived in New York in 1980 after escaping from Havana by boat. Yoruba by origin, he grew up in the atmosphere of carnival and rumba. Here he recreates his country's music in all its vigour, mingled with elements taken from soul music. An intelligent and lively example of cross-fertilization.

Selif Keita. *Ko-Yan.*
CD Island 842 454-2.

Keita mixes, with varyingly successful results, the African tradition and funk, notably by using synthesizers. I think "Primpin" is the most successful track. "Tenin" is an attempt to recreate the atmosphere associated with the *kora*, the harp-lute played by the Mandingo people of West Africa. The lyrics, as in most African songs, contain a moral message: "It's better to do good today for God/ Than to wait for gratitude tomorrow." African pop music is feeling its way, and this recording by Keita is one of the most successful efforts to date.

Isabelle Leymarie ■
ethnomusicologist and journalist

■ CLASSICAL

George Frideric Handel. *Susanna.*
The Chamber Chorus of the University of California, Berkeley/ Philharmonia Baroque Orchestra.
Box of 2 CDs. Harmonia Mundi 907030.32.

This superb oratorio is rarely performed because of its length. Texts in English, French and German outline the history of the work and provide a detailed synopsis of it. The story is set in Babylon, where the beautiful Susanna, during the absence of her husband Joacim, is accused of adultery by two elders whose advances she has rejected. Condemned to death, she is saved by Daniel and is reunited with her husband. The counter-tenor Drew Minter sings the role of Joacim, and soprano Lorraine Hunt sings that of Susanna.

Gregorio Paniagua. *Villancicos.*
Atrium Musicae of Madrid.
CD Harmonia Mundi 1901025.

The *villancico* tradition of Spanish folk songs from the 15th and 16th centuries, which has survived in Puerto Rico, originated in Arab-Andalusian poetry. During the Renaissance, these short polyphonic pieces were inspired by sacred or profane subjects. Traditional instruments such as the *chirimía*, the psaltery, the dulcimer and the crumhorn can be heard on this recording, creating an atmosphere of court festivities.

Franz Schubert. *Works for Piano.*
Alfred Brendel.
Box of 7 CDs. Philips 426 128-2.

Here, performed by one of the greatest living pianists, are the pieces for solo piano composed by Schubert between 1822 and his death in 1828. The idea of death haunts this music and invests it with tragic force. Schubert's work shows a growing consistency, especially in the pieces composed after the death of Beethoven. The "Wanderer" Fantasy is a very modern piece which enchanted Liszt. The "6 Momens musicals" and the late "Impromptus" are redolent of poetry and dance. The authority of Brendel's performance is exceptional. A monumental achievement!

Yoshira Taïra.
Hommage à Noguchi.
CD Auvidis/Unesco D 8302.

Born in 1937, Taïra is one of the dominant figures of contemporary Japanese classical music. He draws inspiration from the West, just as European composers such as Debussy and Messiaen borrowed ideas from Asia, and here pays tribute to the sculptor Isamu Noguchi. A felicitous blend of *shakuhachi* (bamboo flute), flute, harp, cello and tape recordings in compositions which exalt the sanctity of nature.

Martinu. *The Greek Passion.*
Brno Philharmonic Orchestra conducted by Charles Mackerras.
Box of 2 CDs.
Supraphon 10 3611-2 632

The great Czech composer Bohaslav Martinu, who died in 1959, has still not received the recognition he deserves. Sung in English, this work completed in the year of his death and inspired by Nikos Kazantzakis's novel *Christ Recrucified*, provides an arresting social and mythical vision of the world. The music is timeless. It possesses, in the words of Martinu's biographer, Guy Erismann, "the force of the supernatural and of emotion".

Claude Glayman ■
journalist and music critic

Current systems of measuring economic performance often conceal widespread human deprivation and degradation of the environment

Reviewing the accounts

by Michel Batisse

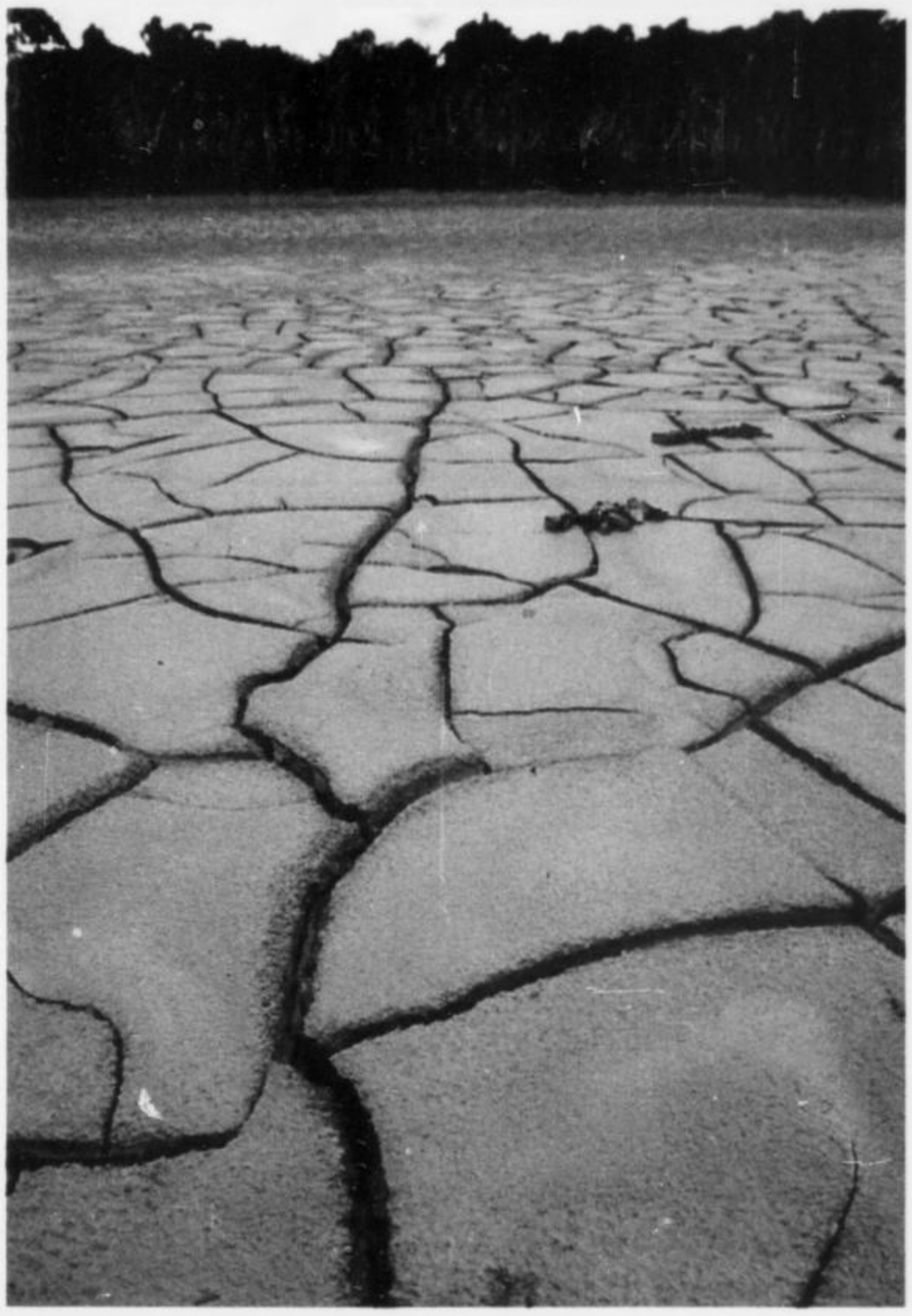
All environmental problems today can be analysed as assaults on the biosphere by modern industrial civilization—the technosphere.* Without this profusion of industrial, agricultural, medical and other inventions, we should not be able to feed, clothe and shelter (with varying degrees of success) the present world population of some six billion people, still less to provide a fraction of them with the comfort and abundance which are the hallmarks of the so-called developed countries.

We have cast in our lot with technology. But technology is not neutral, as the science of which it is an offshoot seeks to be. It is marked by the choices of what has been called the sociosphere* and notably by the principal motor of the sociosphere, the economy.

Does this mean that the economists are responsible for the current environmental crisis? And that no share of the blame attaches to engineers, agronomists, architects and consumers? It would be far too simplistic to look for a single scapegoat in this way, but it cannot be denied that there is something wrong with our economic models and that they are not entirely blameless. The most widespread economic thinking today is still dominated by the Keynesian macro-economic model, which combines consumption, savings, investment and public expenditure and is concerned with attaining, as far as possible, full employment.

Keynesian economics takes no account of the role of natural resources in production, perhaps because it was elaborated during the colonial era, after the great depression of 1929, at a time when natural resources still seemed inexhaustible and it was not generally realized that they constitute the prime source of wealth of almost all developing countries. Perhaps also because the impact of economic activity on the biosphere was then still at a tolerable level. With a world population of only two billion people, annual production was equivalent to today's monthly output.

Soil erosion in Amazonia due to deforestation.



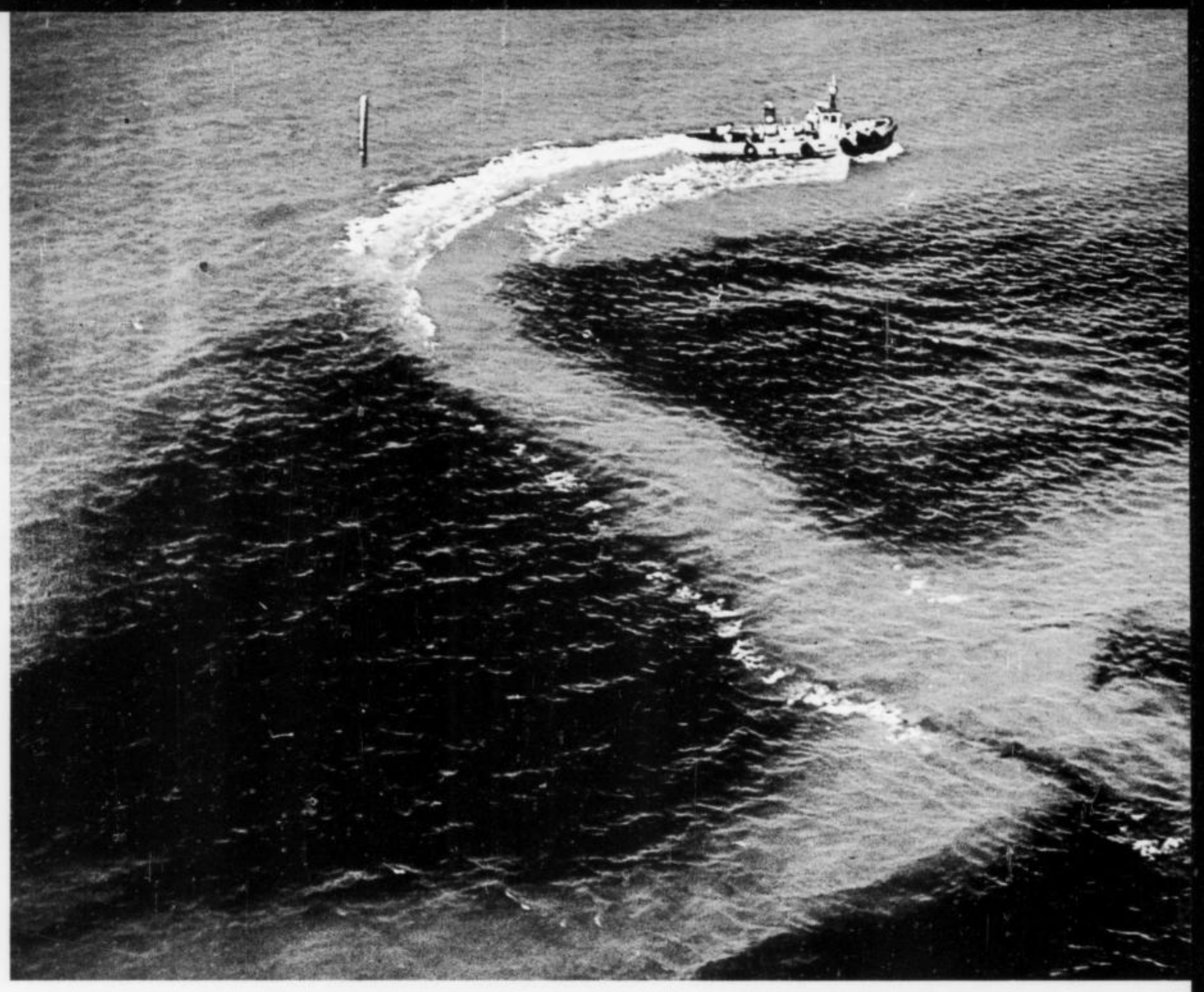
The more a country pollutes, the richer it seems to be...

The spectacular rise in industrial output after the Second World War whetted a growing appetite for all kinds of material goods, of which the automobile is perhaps the most striking symbol. Countries wanted to have statistical records for measuring their progress and their position in relation to others. Income levels were considered to be the best indicators of wealth.

Since then, governments have set annual growth of national income as their major target. Accounting systems for measuring economic activity were established and the notion of Gross National Product (GNP) was invented, as well as its more sophisticated variants such as Gross Domestic Product (GDP). There was a great temptation to measure a country's standard of living exclusively in terms of per capita GDP and to establish a pecking order of countries on this basis.

This is still current practice and the

MICHEL BATISSE,
French engineer and physicist, is internationally known for his work on the environment and natural resources. A former Unesco staff member, he was instrumental in launching the International Hydrological Decade (1965-1974) and Unesco's interdisciplinary Man and the Biosphere (MAB) programme. Currently a consultant with Unesco and with the United Nations Environment Programme, he has headed the Blue Plan Regional Activity Centre for the Mediterranean at Sophia Antipolis, France, since it was created in 1985.



criteria associated with it divide the world into developed and developing countries. However, it has long been accepted that GDP is a rough and ready indicator. One example of its inadequacy is the way in which it totally ignores unpaid work such as that done by the countless numbers of women in the Third World who fetch and carry water and firewood. Regarding the environment, GDP makes no distinction between productive work and palliative measures. Thus the production costs of a factory which causes pollution are added to the costs of combating that pollution. According to this system of accountancy, the more a country pollutes, the richer it seems to be!

Even more serious and contrary to the practice of businesses, which keep a capital account from which they deduct the depreciation of their capital goods over time, states calculating their GDP take no account of the depreciation of the capital comprised by their natural resources and their environment. Generally speaking, in the exploitation of non-renewable natural resources such as oil and fossil groundwater, and also in that of so-called renewable resources such as tropical forests or soils, which are actually only partially renewable, current economic calculations simply consider what is taken from capital as income. Here too, the more a country exhausts its potential in terms of resources, the more its GDP increases and the richer it seems.

In the national accounting system adopted by almost all countries under the auspices of the United Nations, there is currently no means of taking into account the cost of the degradation of resources and environmental factors which do not form part of market mechanisms. There is no generally accepted method of calculating the value of pure air, clean water, wild animals or the beauty of sites. Everything which cannot be considered as property or which cannot be expressed in terms of a price is considered as a gift of Providence, set at our disposal to be used or abused. This inadequacy of economics and this attitude of modern society are bound to encourage the waste of resources and the sack of the environment.

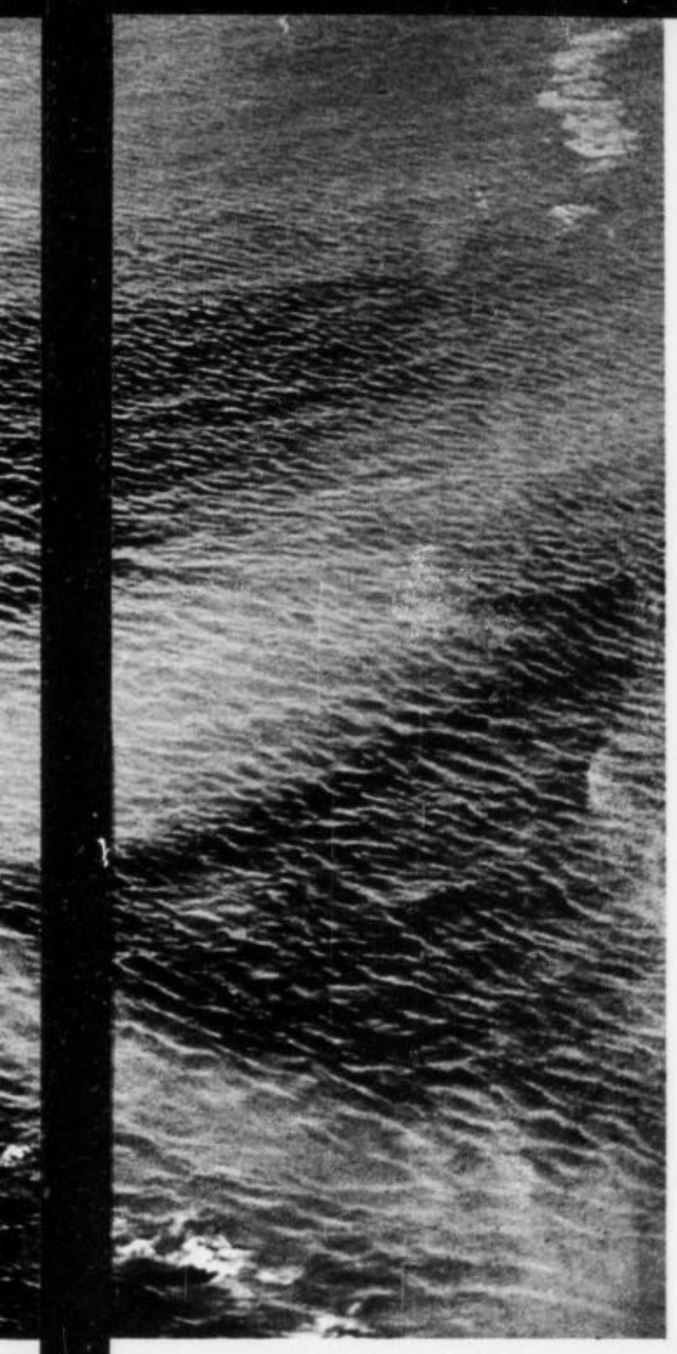
This being so, it is not surprising that advertising should urge us to use more electricity or detergent, that there should be overt or hidden subsidies to encourage the use of more fertilizer and pesticides, and that there should be bulk-user price concessions to encourage us to consume more water, cement or energy. Until relatively recently, for example, extensive deforestation in Brazilian Amazonia was encouraged by tax relief and subsidies in favour of enterprises which embarked on risky animal husbandry projects.

Sustainable human development

In spite of all its inadequacies, the concept of GDP is unlikely to disappear immediately. It is an economic instrument for quantifying market activity in the short term. We should simply not read more into GDP than it really means. It grows as a result of technological progress, but its growth cannot be limitless. In any case growth cannot be based on constantly increasing consumption of natural resources, which is physically impossible. Did not Aristotle believe that the accumulation of "wealth" is not an end in itself? The purpose of life is rather to achieve sustainable human development through optimizing the material and spiritual possibilities available to every human being, while not compromising the capacity to satisfy the needs of future generations.

The United Nations Development Programme (UNDP) took a first step in this direction recently when it created a composite human development index (HDI) which integrates into GDP the adult literacy rate, life expectancy and the purchasing power to buy commodities for satisfying basic needs. It is interesting to note that the United States, which has the world's second highest per capita GDP (after Switzerland), is only in nineteenth position on the HDI. It is also comforting to note that some developing countries with low per capita income, such as China, Costa Rica, Jamaica and Sri Lanka (or countries with a very low income such as the United Republic of Tanzania) score comparatively well in this evaluation of human development.

The HDI is not much better than GDP as a reflection of the environmental situation, but it shows that GDP can be improved as an accounting system. In fact various attempts have been made in the last two decades to take account of the quality of the environment and natural resources in economic analysis. Mineral reserves, forests, water and soil have been taken into account. France has evaluated its natural heritage and Norway is engaged on a similar exercise.



Above, a small boat applying a non-toxic dispersant chemical cuts a clean swathe through an oil slick at sea. Right, "states calculating their Gross Domestic Product take no account of the depreciation of the capital comprised by their natural resources and their environment".
Opposite page below, "efforts are being made to apply more widely the principle that the polluter should pay".

An attempt can also be made to set a monetary value on those commodities which do not figure in market exchanges and to establish "satellite accounts" relating to the main operations which have an impact on the environment. When this is done the result is a downward correction of GDP which may be extremely instructive. An in-depth study of this kind on Indonesia shows that the country's GDP increased by 7 per cent annually between 1970 and 1984, but that if account is taken of losses in terms of soils, forests and oil, the increase was actually only 4 per cent per year. Similar calculations carried out for other countries could even show a gradual reduction in national wealth.

Perhaps more important than these adjustments, at the somewhat abstract national scale, is the inclusion of environmental impacts in the cost-benefit analysis of major development programmes such as road and dam construction, forestry and mining. Natural resources and the environment have so far hardly figured in methods of calculation, for the reasons given above. However, thanks notably to the work of the World Bank and UNDP, attempts are today being made to modify cost-benefit analysis procedures and to respect a certain number of minimum safety norms relating to environmental impacts.

Efforts are also being made to apply more widely the principle that the polluter should pay, that those who cause pollution should be made to pay for the damage they cause. The principle is relatively easy to apply in the case of an oil company responsible for an oil spill that has to be cleaned up or an industrialist who discharges chemical products into a river and can be taxed accordingly. The situation is more complicated when all the farmers in a region pollute water with pesticides but cannot be identified individually. And what can be done when the air polluter is simply the average motorist?

An ecological economy

It must be admitted that the accounts of the difficult marriage between economics and ecology have not yet been fully put in order. The debate is far from academic, since development decisions are still largely based on Keynesian economic analysis, and no country or place is unaffected by these decisions.

The fact is that the globalization of markets is ineluctably bringing rich and poor countries together and imposing on them a system of trade, prices and regulations which, by glorifying GDP and ignoring capital resources, is dangerously aggravating pressures on the environment thousands of kilometres from the place where the decisions are taken.

Thus poor accounting in one country may lead to wrong decisions for itself and for others. Some tropical monocultures for export would doubtless not have been cultivated if it had been possible to calculate their ecological and social disadvantages. Conversely, it would be interesting to explore other paths of development than those prompted by excessively simple forms of economic calculation. It has, for example, been shown that the sustainable exploitation of fruit and other small products of the Peruvian forest could bring in two or three times more than felling for timber, and would have the obvious advantage of leaving the forest intact.

These methods of sustainable development, which help to conserve ecosystems and benefit the local populations which take part in them, are encouraged in the biosphere reserves supported by Unesco. Certain precautions clearly have to be taken, especially that the crops chosen should be marketable, for if economics must take account of ecology, the opposite is also true.

Classical economists such as Adam Smith, David Ricardo and Robert Malthus, and even Karl Marx, took account of the value of agricultural land, but until very recent times the economy has simply ignored ecology and development has paid no heed to the environment. At present the economy is trying with more or less good grace to mitigate the most visible forms of ecological damage. Pollution is combated, national parks are created, policies for the environment are announced. These are steps in the right direction but they are not enough. We must move more resolutely and more swiftly towards a new stage which will effectively integrate economic systems with ecological systems and will lead the world as a whole to the sustainable development which hitherto has been talked about rather than effected.

We may feel that there is little we can do about the issues raised here. This is not so. Our daily choices and behaviour define the forms of development adopted in different parts of the world. The protection of the environment begins on our own doorstep. It is not only a matter for other people, for businesses and governments. Are we, for example, ready to reduce pollution and economize on oil consumption by using our cars only when we really need them? Are we ready to buy only "environment-friendly" products? To take a stand against building up coastlines and green spaces? To avoid despoiling nature and wasting resources? Are we ready to support new ethical standards for the relationship between economic activity and ecology? Or do we wish to remain accomplices of the world environment crisis? We should all re-examine our accounts. ■

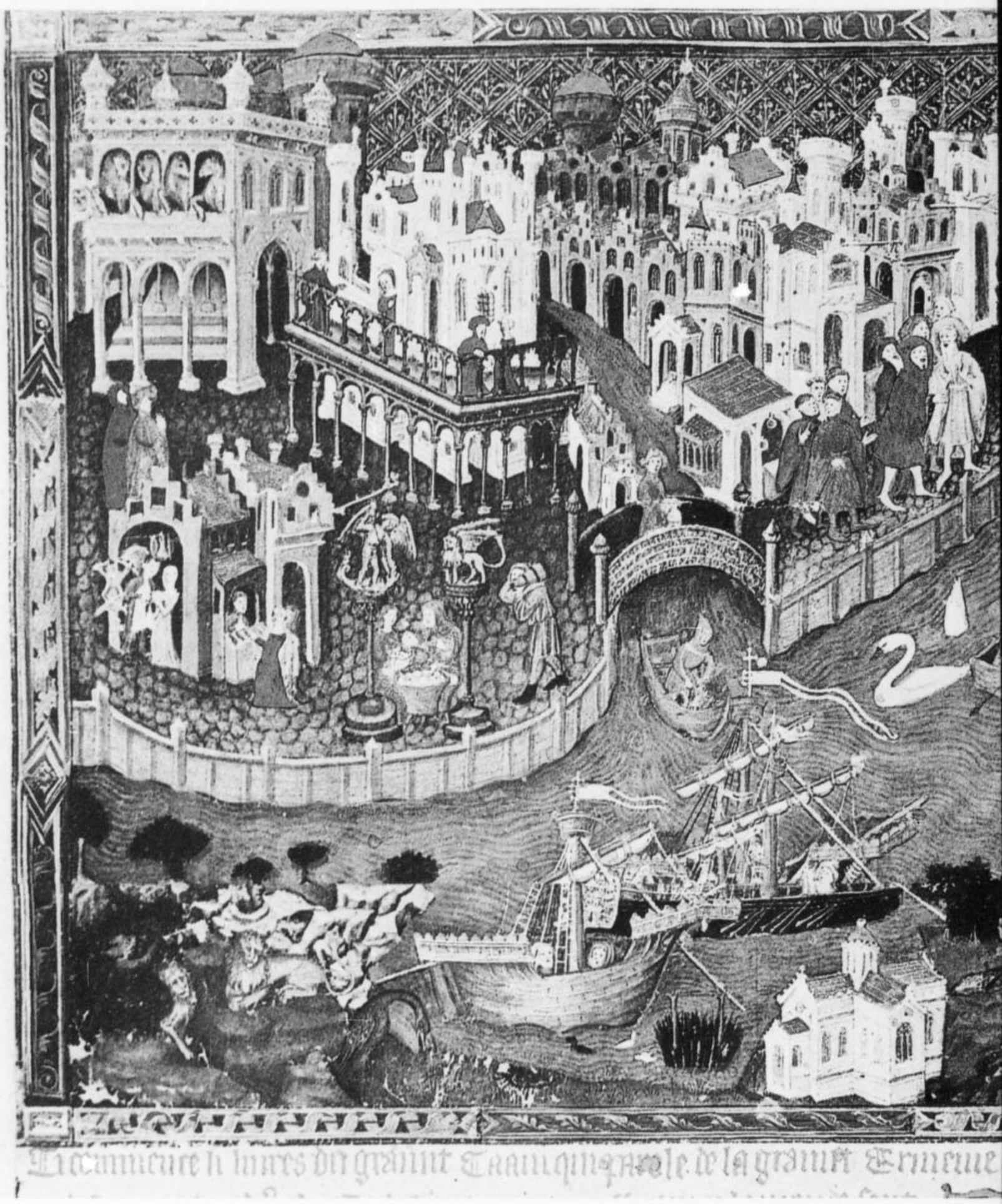
* See the article by Michel Batisse in the November 1990 issue of the *Unesco Courier*.

The Silk Roads

were channels of trade and dialogue between East and West at least 2,000 years ago. Today Unesco is seeking to renew this dialogue through a far-reaching project to investigate these historic arteries of communication.

An overland expedition has already been completed, and on 23 October 1990 a maritime expedition set sail from Venice en route for Osaka in Japan, where it is scheduled to arrive in March 1991. French writer François-Bernard Huyghe, on board the expedition's "Ship of Peace", fills in the background to this unique voyage of discovery.

FRANÇOIS-BERNARD HUYGHE
is a former member of Unesco's Division of Cultural Heritage.



In the wake of Marco Polo

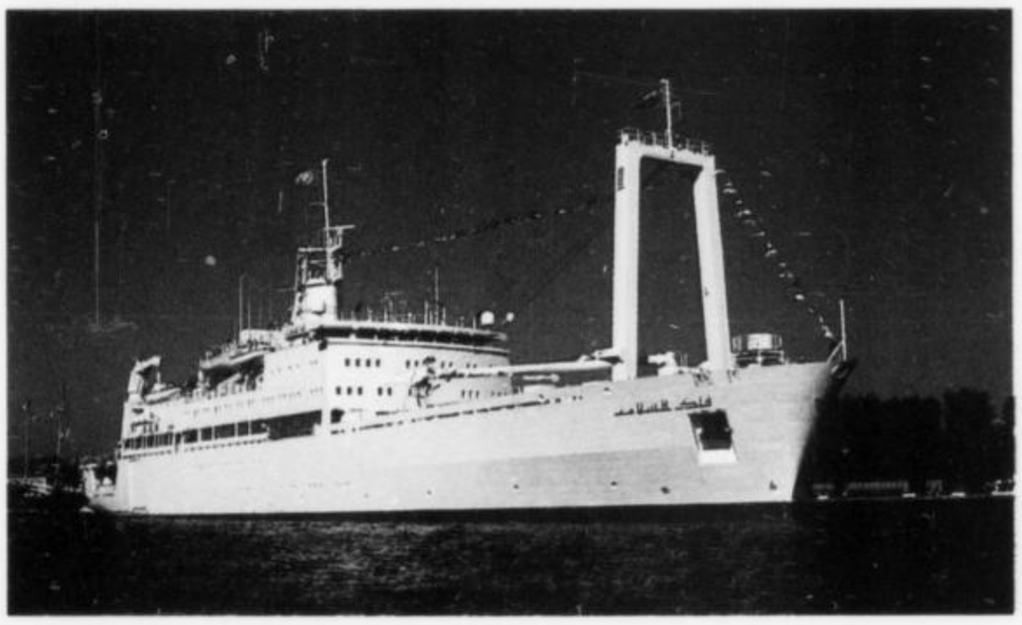
by François-Bernard Huyghe

'A crowd of people gathered on the canal, standing on vessels. Silk parasols were everywhere to be seen. The boats themselves were admirably painted.'' In these words the great Arab traveller Ibn Battuta, who spent thirty years journeying through the Islamic world of his time, described the great city of Hangzhou in southern China, in the mid-fourteenth century.

On 23 October 1990, there was a similarly colourful scene at St. Mark's Basin in Venice, terminus of one of the routes along which the Chinese silk noted by Ibn Battuta was for centuries brought to Europe. While crowds watched from the quayside, a flotilla of historic boats gathered to celebrate the departure of the Omani ship *Fulk al-Salamah*, or ''Ship of Peace'', on a journey that will retrace the ancient maritime silk route from Europe to the Far East. The vessel has been loaned by Sultan Qabus of Oman as the flagship of an international scientific expedition that marks a high point in Unesco's Integral Study of the Silk Roads: Roads of Dialogue project. The Venetian rowers raised their oars in salute as we prepared to set sail to a fanfare of trumpets and a roll of drums.

Also moored in St. Mark's Basin for the send-off was the Sultan's 54-metre three-masted dhow *Zinat al-Bihaar* (''Beauty of the Seas''). Although it is only three years old, the traditional lateen-rigged wooden dhow and the traditional costume of the envoys from Oman who mingled with the international delegations were reminders of the historic Venice depicted by Carpaccio and other Venetian painters, of the days when ambassadors, travellers and merchandise from the whole of the then known world converged on ''the most serene city'' and took part in ceremonies presided over by the

The city of Venice as depicted in a manuscript copy of *The Travels of Marco Polo*, 1298-1299.
Right, Zheng He (1371-1435), a Chinese navigator and diplomat selected by the Ming emperor to be commander in chief of the missions to the "Western Oceans".
Below, the "Ship of Peace" in Venice harbour.



Doge in his magnificent state barge, the *Bucintoro*.

Flying the flag of the United Nations, the *Fulk al-Salamah* will carry the Unesco expedition from Venice to Osaka in Japan, where it is scheduled to arrive on 3 March 1991. Over fifty scientists and journalists on board will be calling at some twenty-one ports in sixteen countries, where symposia, visits and other events will be held as part of the research programme.

The aim of the Unesco project is to study the ancient channels of communication between Orient and Occident from different viewpoints and disciplines. The term "Silk Roads"—*Seidenstrassen*—was coined by the German geographer Ferdinand von Richthofen, himself a great traveller in the nineteenth-century tradition, to designate the vast network of exchanges and influences which stretched across Asia as early as the second century BC and helped to shape its spiritual and material history. Many scientific disciplines—above all the human sciences—are represented on the "Ship of Peace". Among them are economics, archaeology, the history of technology, the history of religions, sociology, linguistics, geography and philosophy. The very name of the ship is a symbol of a desire to understand and recreate the dialogue between Orient and Occident of which Venice is the incarnation.

The quest of Marco Polo

The most celebrated Venetian of all time was Marco Polo, the traveller and merchant whose account of his adventures in central Asia and China in the late thirteenth century first set Europe dreaming exotic dreams about the Orient. "I think it pleased God that we should come back, so that people should know the things that are in the world.... Never has man, neither Christian, nor Saracen, nor Tartar, nor pagan, made such a quest across the earth as that of Messer Marco, nephew of Messer Nicolò Polo, noble and great citizen of the city of Venice." These are the last lines of the Tuscan version of his book *The Travels of Marco Polo*, which he dictated to his fellow-captive, Rusticiano of Pisa, after he had been made prisoner by the Genoese in 1298.

There began an episode without precedent in the history of literature. Marco Polo's story of his adventures, variously titled *Le Livre des Merveilles du Monde, Imago Mundi, Divisament dou monde*, and translated into several romance languages, spread throughout Europe. It inspired many armchair explorers and some real ones, the most famous of the latter being Christopher Columbus who, when he sighted the coast of Cuba in 1492, thought he had reached Marco Polo's Cathay. It has been said that Marco Polo discovered China in his lifetime and America after his death. This is historically false, but poetically true.

It had long been known in Europe that there was a country in the East which manufactured *sericum* (Latin for "silk" from *si*, the Chinese word for silk). When this mysterious and prestigious fabric reached Rome in the second century BC, little was known about it except that it came from the country of the *Seres*, a fabulous place where, according to the Greek satirist Lucian, people lived to be 300 years old.

The many routes along which silk was brought westwards varied over the centuries, creating a network of contacts some of whose traces can still be followed in space and time. Few men crossed the vast Eurasian continent from end to end. It was not until 98 AD that the first Chinese embassy arrived in the West, and in 166 AD what is known as the embassy of the emperor Antoninus reached China. In point of fact the "ambassador" was an adventurous merchant and not a representative of imperial Rome.

Several centuries would pass before the Far East came into more frequent contact with western Europe. The first European explorers set out for China in the Middle Ages, most of them by overland routes, some by sea. The majority were missionaries such as Jean de Montcorvin, who sailed from Venice in 1288 and ten years later built the first Christian church at Kanbalik (Beijing). Some, such as Giovanni Loredan, entered the service of the Mongols. The Vilioni family, who may also have been Venetians, were also great travellers who left traces of their presence in the Far East. One member of the family is known to have made his will at Tabriz in 1264, and at Hangzhou is the tomb of a Catherine Vilioni who died on 2 June 1342.

Who knows how many other Europeans set out for the East and travelled at least part of the way along the Silk Roads? The first stage of the journey from Europe was most likely to be a sea voyage. The classic route was from Genoa, Brindisi or Venice to the east coast of the Mediterranean, where an adventurous overland journey would begin at Alexandria, St. Jean d'Acre or Istanbul. In 1340 the Florentine Francesco Balducci Pegolotti wrote in his *Pratica della Mercatura*, the first travel guide for European merchants, that it took more than seven months to travel from the Sea of Azov to Hangzhou. The journey by sea took even longer.

Venice occupied a key position in the Western approaches to this Silk Road. It was known, after all, as the gateway to the East. Marco Polo was the first Venetian to reach China, but the city of the Doges had long held sway over the Mediterranean basin. Fortified by its political system (a Republic which lasted eleven centuries without a break), its navy, its colonies, its diplomats and merchants, Venice became the indispensable intermediary between Orient and Occident. Until the sixteenth century, it was the European port famed for precious Eastern merchandise such as silk, spices, carpets and porcelain.

The secrets of paper

Oriental communities driven from their homeland by war found asylum in Venice, and in the fifteenth and sixteenth centuries the city was thronged with foreigners who brought with them their customs, crafts and trading enterprises. Jews, Armenians and Greeks had their own neighbourhoods. And there is a *fondamenta* of the Ormesini in Venice, a street of the people of Hormuz.

The foreign colonies which became established in Venice enriched the Republic with new technologies. In addition to their mastery of silk and velvet weaving, the Chinese held the secrets of paper manufacturing, which also reached the West by stages. When printing was introduced to Venice, it spread rapidly, its development boosted by the city's heterogeneous community. Many Greek, Hebrew and Arabic texts were printed.

LETTERS TO THE EDITOR

Back numbers wanted

A long-standing subscriber to the French edition of the *Unesco Courier*, I am trying to complete my collection. After a fruitless search in bookshops, I am writing to you directly. I would be prepared to buy the following back numbers if anyone would like to part with them: the years 1948 to 1968; January to October 1969; February, November and December 1970; March, July 1971; May 1972; March, August, September 1975; July, November, December 1977; the year 1978; November 1983.

Bertrand Ferro
3 rue de la Meuse
54520 Laxou (France)

For sale

I'm looking for a buyer for 46 copies of the *Unesco Courier*, in French, dating from March 1962 to March 1974.

Emile Granger
33 rue des Baconnets
92160 Antony (France)

Plan of action for survival

Readers should be grateful to the *Unesco Courier* for publishing, even a year late, the text of the Vancouver Declaration of September 1989 which sets out the appalling problems facing humanity and outlines some alternative visions of the future.

As a concerned inhabitant of our common planet, it seems to me that we have reached the stage where mere declarations are no longer adequate. It is possible that the present transition from competition to co-operation between the world powers may herald the dawn of a new era. Perhaps we are heading towards the realization of the old dream of a world federation, as expounded by Albert Einstein, H.G. Wells and Bertrand Russell.

But it is also possible that the formidable political and economic forces which rule us are opposed to change, and that they are in fact anxious to perpetuate the present system, whether for selfish reasons or through ignorance of the true magnitude of what is at stake. A collective and determined effort by leading scientists and intellectuals may thus be required to prepare a practical plan of action, and to bring the full facts of the tragedy that threatens us to the attention of world leaders and the public at large. At the same time, an organization like Unesco is clearly in a position to play a leading role in shaking the public out of its indifference.

Zeev Raphael
Haifa (Israel)

Old obsessions

I read with great interest the article on "Rethinking scientific progress", by Marc Chapdelaine and Jacques Richardson, in your September 1990 issue. The eminent names quoted in the text compel respect and may even encourage more profound reflection on the human condition. It seems that we are all cogs in the wheels of an age racked by multiple problems and that we have to suffer the consequences of an imbalance between developments in science and culture on the one hand, and approaches to economics and communication between peoples on the other.

At the heart of this universal dilemma lies the regrettable tendency, unmitigated by time, to give in to old obsessions which could at any moment plunge us back into horror and hatred.

Professor Yujiro Nakamura, in his warning to the Vancouver conference, seems to have summed up the phenomenon very well. He states: "Contact between different peoples and nations has not brought mutual respect, but often violent opposition...."

Lack of understanding between cultures can only in the long term encourage those who are so distracted by blind obedience to the principles of another age that they do not see a fundamental truth—the only way to put an end to suffering is a thorough understanding of its causes.

At the dawn of the third millennium, as you are attempting to show in your invaluable magazine, it is vital that among the dangers that threaten us all this particular problem should be recognized as a major element in human society. Otherwise blood and tears will flow again and the fine spirit of generosity and humanism expressed by some of the greatest figures of our time will be rendered meaningless.

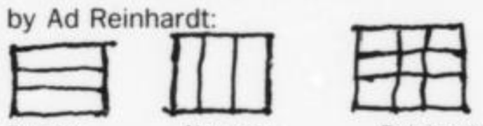
Judging by the extremely serious and alarming events taking place today, we may be in danger of taking the chaotic road to decline, to general xenophobia and rejection of our fellows.

That would be the end of the human race and its fragile little world, for to make a mistake where mankind is concerned is, ultimately, to condemn the whole of humanity.

Francis Hervé Charissoux
Lyon (France)

Correction

I am glad to be among the thousands of readers who will write to you in order to tell you that the painting on the cover of the December 1990 issue of the *Unesco Courier* is not a Rothko but a Newman, the title of which is *Vir Heroicus Sublimus*. In order to help you for future identifications among abstract expressionists, please remember this very humorous résumé by Ad Reinhardt:



Rothko Newman Reinhardt

Jessica Boissel
Paris

Full marks! We apologize to readers for the error. Editor

In the wake of Marco Polo (CONTINUED)

In general, intellectual influences travelled only short distances along the Silk Roads. No Chinese poet became known in the West, no Greek or Latin author crossed the Great Wall. Buddhism long remained unknown in the West, and the Christian missionaries who set out for the Far East never really implanted their doctrine. Only after the Jesuit missions began in the sixteenth century did Western Christianity become established in some parts of the Orient. Islam alone expanded in the East. It was not until the late seventeenth century, and even more in the eighteenth, that the West really became interested in what others thought and in studying their history.

Once the concept of the Silk Roads had been established by von Richthofen, attempts were made to locate them with precision. Routes followed since the second century BC were retraced. Explorers visited towns which had been staging posts on routes through steppe and desert. They journeyed from Calcutta to Balkh and followed the paths whereby Buddhism had spread. They sailed from Alexandria and through the Red Sea, the Gulf of Aden, the Sea of Oman, the Indian Ocean and the China Sea to Osaka. Great interest was taken in the trading centres—caravanserais, post systems, Venetian trading houses. A mass of information about the Silk Roads began to be accumulated. The experts involved in the Unesco project are seeking to bring together and make sense of all this scattered knowledge.

But let us not forget that there are also imaginary journeys, evoked in myths and fabulous stories. From travellers' tales to major works of literature, the Silk Roads still weave a magic spell.

As we set sail in the *Fulk al-Salamah*, the thoughts of many of us on board turned irresistibly back to Marco Polo. ■

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44th YEAR

Published monthly in 35 languages and in braille by Unesco, The United Nations Educational, Scientific and Cultural Organization.

31, rue François Bonvin, 75015 Paris, France.

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IMPRIMÉ EN FRANCE
(Printed in France) - DEPOT LEGAL : C1 - JANVIER 1991.
COMMISSION PARITAIRE N° 71844 - DIFFUSE PAR LES NMPP.
Photocomposition: The *Unesco Courier*
Photogravure-impression: Maury Imprimeur S.A., Z.I. route d'Etampes, 45330 Malesherbes.

ISSN 0041-5278 N° 1 - 1991 - OPI - 90 - 3 - 489 A

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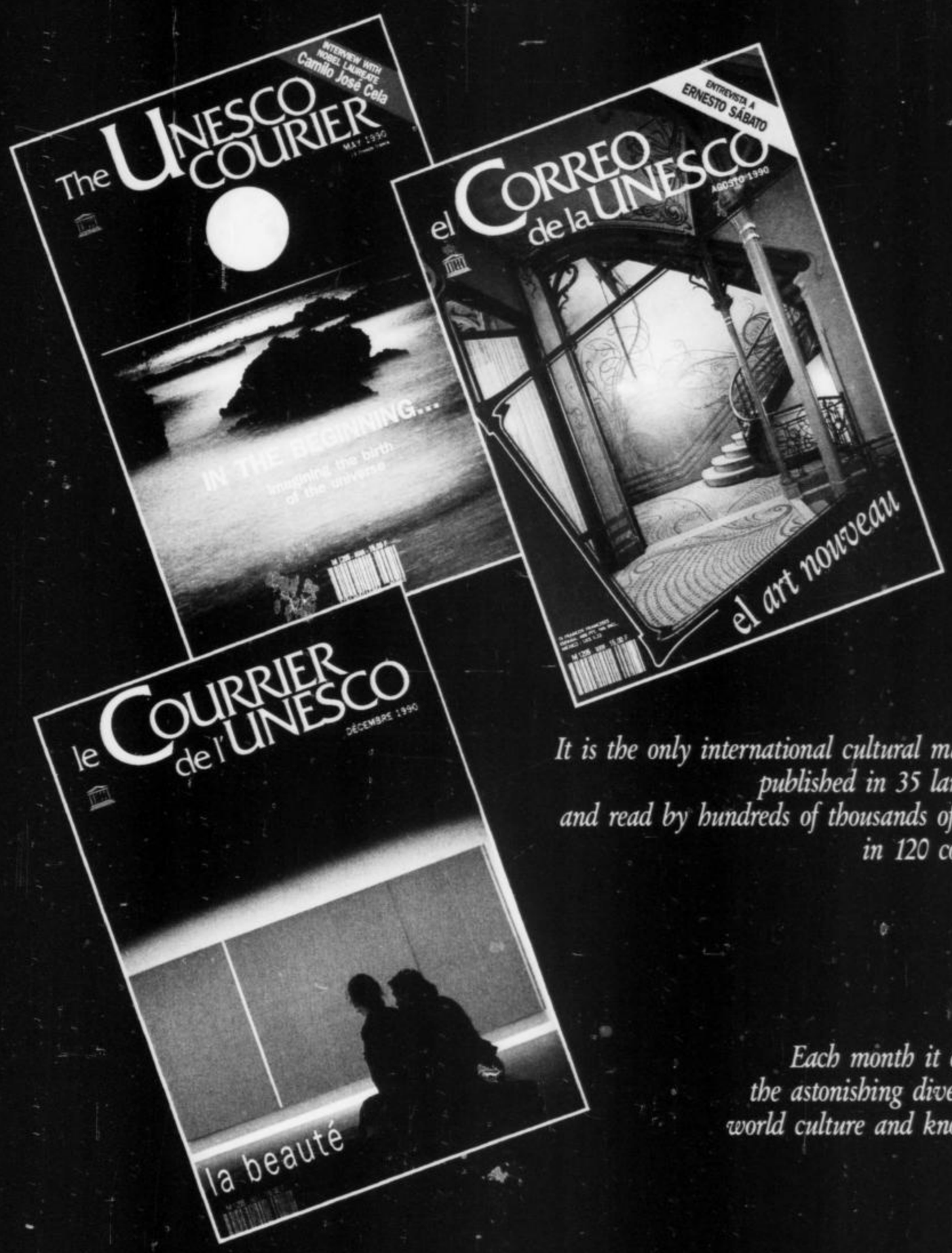

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